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TOSCANELLI AND COLUMBUS

H. VIGNAUD

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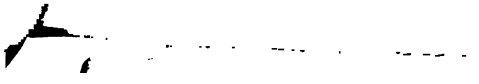

TOSCANELLI AND COLUMBUS

TOSCANELLI AND COLUMBUS

THE LETTER AND CHART OF TOSCANELLI

ON THE ROUTE TO THE INDIES BY WAY OF THE WEST, SENT IN 1474 TO THE PORTUGUESE FERNAM MARTINS, AND LATER ON TO CHRISTOPHER COLUMBUS

A CRITICAL STUDY

ON THE AUTHENTICITY AND VALUE OF THESE DOCUMENTS AND THE SOURCES OF THE COSMOGRAPHICAL IDEAS OF COLUMBUS, FOLLOWED BY THE VARIOUS TEXTS OF THE LETTER, WITH TRANSLATIONS, ANNOTATIONS, SEVERAL FACSIMILES AND ALSO A MAP

BY

HENRY VIGNAUD

First Secretary of the United States Embassy at Paris; Vice-President of the Society of Americanists of Paris, etc.

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PREFACE

THE English edition of this work, which I now give to the public, differs in many respects from the French edition. Several new chapters have been added, and important alterations and amplifications made. I have enlarged considerably on the personal rôle of Columbus in the fraud I seek to unveil, and the portion of the work bearing on the map has been both recast and extended. This part has been further completed by a new table for the understanding of the measurements attributed to Toscanelli in a form at once clearer and more detailed, and by a hypothetical restoration of the famous map which is supposed to have played so famous a part in the scheme which led to the discovery of America. The notes have also been increased and amended, while a great number of entirely new ones, including some of the most important, have been added.

Finally, additional Appendices accompany the work. One gives, after the *Raccolta Colombiana*, a transcription of the facsimile of the Latin text of the letter to

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Martins; in others an attempt is made to elucidate and illustrate the geographical notion which the letter to Martins and its accompanying map are intended to convey.

In the Preface to the French edition, I have said what was due to my friend M. de la Rosa, to whom should be credited the first idea of this book, and to M. Sumien, who has favoured me with a valuable critical work on the Latin text of the famous letter, a work which I again reproduce in an English garb in the present edition. In the preparation of this English edition, I have contracted further obligations which it is a pleasure to me to acknowledge.

To Mr James Fitzmaurice-Kelly, the well-known writer and profound Spanish scholar, who was the first to make known my work in England, I am indebted for the translation of the Spanish version of the letter. No one could more ably acquit himself of that task than the learned Irishman to whom the world owes the most admirable Life of Cervantes, and the short History of Spanish Literature, which is considered by all scholars the standard work on that subject in the English tongue.

To the Rev. W. H. Kent, the scholarly son of a scholarly father, Mr Charles Kent, I owe the translation of the Latin text of the same letter. Mr John B. Shipley, who has long interested himself with Columbus, has given me many valuable sugges-

tions, which I was glad to put to good use. In one of the Appendices will be found a letter from him which is very suggestive.

In the last place I mention Mr Victor Collins, to whom I feel more obliged than I can express. He has revised my text, read my proofs, translated the Italian text of the letter, and taken charge of all the details connected with the printing and publishing of this book. Under these headings I have contracted towards him obligations which all my friendship can scarcely repay. To him, and to all those I have named, I offer my sincerest thanks and gratitude.

HENRY VIGNAUD.

UNITED STATES EMBASSY,
PARIS, 30*th March* 1902.

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INTRODUCTION

THE question of the authenticity of the famous letter a learned Florentine is supposed to have sent to Columbus, some fifteen or eighteen years before the latter made his wonderful discovery, giving him advice and some information to aid him in his undertaking, has a far wider scope than the mere determination of the historical value of a document which has hitherto remained unchallenged.

It means, in truth, no less than to ascertain if the greatest event in the world's history—the sudden revelation of the existence of one half of the globe hitherto unknown—was in reality due to researches based on scientific data, the truth of which has been proved by the result.

This question, to which a negative reply cannot be given without our placing ourselves in opposition to long established opinion, upon which have been formed all our mental conceptions of the subject, compels us, in fact, to investigate whether the history

of Columbus, such as it has been told by Las Casas and Ferdinand Columbus, and such as it has been accepted for four centuries, does not rest, in at least one essential particular, upon an error, which, if it were demonstrated, would radically change our belief in the causes which led to the discovery of America.

There is nothing harder to overturn than an opinion which has in its favour time and numbers. The belief that Columbus was a man who had, as the result of his own unaided studies and investigations, arrived at the conclusion he should find Asia to the west has become so embedded in history, and is supported by evidence at once so ancient and respectable, that it seems something little short of sacreligious to cast a doubt thereon, and as though a storm threatened to overwhelm the bold innovator.

Nevertheless it must be said that the more the early doings of Columbus are studied the less justified appears to be this belief. As a result of reading and re-reading the documents, of comparing facts with one another, of studying dates, of weighing the assertions of Columbus himself, and of those of his contemporaries referring to him, one ends by suspecting that perhaps things did not happen as he states, and by asking ourselves whether all the theoretical reasoning we are informed was the mainspring of his undertaking, and consequently the cause of his great discovery, was not invented after the event.

Were we blindly to accept the evidence of Columbus' contemporaries and that of the succeeding generation, we should not be justified in raising these doubts. All, with the solitary exception of Gómara, whose authority is, however, unfortunately very questionable, seek to show that the inception of the original ideas of the discoverer of the New World had a scientific character. But true criticism is sometimes justly mistrustful of the evidence of contemporaries, for too frequently it is both insincere and partial. If from them comes all our true information, it is no less a fact that from them also come all those errors it is most difficult to correct afterwards. The chronicler who, in the silence of his study, records the events of his day seldom resists the temptation to give them a certain bias. He clothes history and embellishes it for posterity. He arranges affairs as he would have had them happen. History, as it is given by contemporaries, especially when they think their statements are safe from all investigation, is nearly always thus arranged, and it is not the least hard task of the critic to pick out the truth lying hid beneath these errors or deliberate misstatements.

Las Casas, who was an honest man, and who wrote a book without which we should but imperfectly know the history of the discovery of America, has himself nevertheless arranged matters,

so far as Columbus is concerned, as he considered they should have occurred. Most of the legends and tales from which have been fabricated the story of the youth of the Great Navigator come from him rather than, as has been generally supposed, from Ferdinand Columbus. Thanks to recent critical works, more particularly to those of Mr Harrisse, many of these legends are now destroyed and no longer find a place in any serious work. But, if, by good fortune, there had not been discovered buried deep amid the private records of Italian notaries the proofs of their falsehood, they would still disfigure the pages of not a few books of history. No one any longer believes that Columbus was born in 1436, as was formerly supposed; that he was of noble descent; that he reckoned admirals in his family; that he studied at the University of Pavia, and that he fought under King René. It is now possible to go further and show that he was not born any time between 1446 and 1451 as late investigations seem to have established, but actually in 1451 itself; that he only arrived in Portugal towards the end of 1476 or the beginning of 1477; that he had but little travelled, and that he never made proposals to Genoa, Venice, England and France.

These corrections, important though they may be, change in nothing, it is true, the essential history of the causes which led to the discovery of the New

World as it is related to us. But it would be different were it demonstrated that the letter to Martins is apocryphal; that Columbus never corresponded with Toscanelli; and that, consequently, he could not have borrowed from that scholar any of the cosmographical and geographical notions which are supposed to have led him to his great discovery. In that case we should have to dismiss as false all that we have hitherto believed as to the circumstances which determined Columbus to undertake the discovery of the Indies; and these new corrections, added to those already made, might well leave standing very little of the history of the early days of the lucky Genoese, such at least as tradition has made it, and as it has been everywhere accepted.

The examination of the question, whose solution may have from an historical point of view the grave consequences just indicated, is the object of the present work.

It would be presumptuous to assert that we give that solution here; but the important questions raised by this point of history are now stated in such a manner as renders it impossible any longer to ignore or withdraw them. The inquiry begun by us will be continued and brought to a successful issue by others. We must learn if for four centuries we have not been the dupes of a fraud which has hidden from us the real causes that led to the greatest event in

the history of the world. We must ascertain whether the place we have assigned to Toscanelli and Columbus is the one they really ought to occupy. What can be at once affirmed is that the history of the immediate causes leading to the discovery of America, as it was understood by Humboldt and Washington Irving, and as it is still believed by the greater part of the authors of our time, has to be entirely re-written.

This great undertaking falls not to us to perform; but others will carry it through.

FIRST PART

THE LETTER

SOURCES OF INFORMATION

BIBLIOGRAPHY

I.—THE LETTER ITSELF.

It is a letter dated Florence 25 June 1474. It purports to have been written by Paolo Toscanelli, a learned physician and astronomer of Florence, and addressed to a certain Portuguese canon, named Fernam Martins, in answer to a request for information which King Alfonso V had instructed him to obtain. There exist a Latin text, which is believed to be a copy of the original, and two ancient versions, one in Spanish and the other in Italian.

I.—The Original Latin Text.

This text was only discovered and published in 1871. During a voyage made that year in Spain, Mr Harrisse visited the renowned Seville Library where is preserved the valuable collection of books made by Ferdinand Columbus, and known as the Colombina. The obliging custodian, Don José Fernández y Velasco, placed in his hands one of the gems of the collection, namely, a copy of the 1477 edition of the *Historia Rerum Ubique Gestarum* of Æneas Sylvius (Pope Pius II), which had belonged to Columbus, who had written on its margins a great many notes and extracts. These annotations were already known. But,

while examining the precious volume, Mr Harrisse discovered that one of its blank pages contained the transcription of a Latin letter in which he recognised the text, mentioned by Las Casas and Ferdinand Columbus, of the letter to Martins of 1474, which Toscanelli is supposed to have sent to Columbus, and which was then known only by the Italian version in the *Historie* and the Spanish version of Las Casas. Mr Harrisse immediately published the document, with a facsimile, and it appeared in one of the volumes of the collection of the Bibliophiles of Seville.

This discovery and publication rendered a distinguished service to historical research and deserved to have been welcomed with gratitude by the Republic of Letters. But Mr Harrisse experienced the lot of many other discoverers. It was alleged that what he had found was already known, and, furthermore, that the document had been pointed out to him by the librarian of the Colombina. These remarks appear to have escaped for some time the attention of Mr Harrisse. But, in 1873, the President of the Geographical Society of Paris, M. D'Avezac, having mentioned in his work, *Canevas chronologique de la vie de Colomb* (Paris, 1873, p. 50, note 4), that the fortunate discovery of this document was due to the learned American critic, some one, claiming to be well informed, made certain observations to him on the subject, with the result that he withdrew this statement, and, at the same time, declared it had been *demonstrated* to him that the discovery was due to the librarian of the Colombina, the too modest Don José Fernández y Velasco (*Le Livre de Ferdinand Colomb*, Paris, 1873, pp. 45 and 46). Thereupon, Mr Harrisse called on the latter to explain himself, and received from him the following remarkable reply : that for years he had known the Latin text of Toscanelli's letter, but had attached no importance to it, as he had thought the original was in Italian ! Coming from a librarian of the Colombina such a reply was pitiful. How, indeed, can it be admitted that the

guardian of this famous collection ignored that the letter of Toscanelli was written in Latin when Ferdinand Columbus says so, when Las Casas says so, when Barcia says so, and that all the Columbists were searching everywhere for that text! It must be one of two things: either this scholar really did not know that Paul, the physician (*Paulus physicus*), of the letter in question was Toscanelli, or he was a nervous man who dared not maintain against a critic of Mr Harrisse's calibre, whose bite on occasion is severe, that he knew the true character of the letter.

Whichever it may be, Mr Harrisse considered himself satisfied; he published an extract from the note of the Colombina's librarian in his reply to M. D'Avezac (*L'histoire de Christophe Colomb attribuée à son fils Fernand*, Paris, 1875, pp. 57-58), and considered the affair was ended. But it was not so.

In 1880, the President of the Norman Geographical Society, M. Gravier, had occasion to mention Toscanelli in his Memoir, *Les Normands sur la route des Indes* (Rouen, 1880, p. 27); in a note he added that, before Mr Harrisse, the Comte de Paris had had Toscanelli's letter copied at the Colombina, and quoted as his authority a letter communicated by M. D'Avezac, who clearly persisted in believing that priority for the discovery of the true character of the document belonged to the librarian of the Colombina. He had, in fact, written to M. Uzielli, in March 1874, that he knew from "undoubted and direct evidence" a copy of Toscanelli's letter had been "made in December 1858 from Columbus' autography," and this had "settled his convictions as to the discovery of this document" (*Toscanelli*, No. 1, January 1893, p. 7). Evidently he refers to the copy made for the Comte de Paris, the same in fact to which M. Gravier alludes.

Desiring to clear up fully this small matter, I wrote to M. Gravier begging he would make me acquainted with the letter to which he had referred. He very kindly immediately replied, and

informed me that M. D'Avezac had read the letter in question to him, and had not left him a copy; but that it would probably be found among that scholar's papers, which were now in the hands of his grandson, M. de Frémery, who doubtless would be pleased to communicate it to me. M. de Frémery, to whom I then wrote, was in fact most obliging. Not being able to lay his hand upon the letter, he took the trouble to ask M. Gravier for such indications as would facilitate his search, and made a thorough hunt for the document. He did not succeed in finding it. The net result of all this correspondence was that the missing letter was dated 1873, and had been written by a secretary of the Comte de Paris.

I proposed pursuing this inquiry by addressing myself to the Duke of Orleans, who might have found among his papers some notes enabling him to say whether it was before Mr Harrisse's publication that the Comte de Paris had visited the Colombina, and whether, at that period, the Comte knew that the letter of *Paulus physicus*, in the volume of Pius II, was the original text in Latin of Toscanelli's letter; but other occupations prevented me from carrying out my intention. The chief point after all was ascertained. Whether the librarian of the Colombina knew or did not know the real character of the letter copied upon the volume he had placed in Mr Harrisse's hands, it is certain he did not mention the fact to him.

It is therefore to the author of the *Biblioteca Americana Vetustissima* that we are indebted for revealing and publishing this precious document. Still there would be some interest in clearly establishing the point, for, in 1893, the President of the Royal Geographical Society of London, Sir Clements Markham, repeated the opinion of M. D'Avezac and M. Gravier (*The Journal of Columbus*, etc., London, 1893, *Hakluyt Society*); this compelled Mr Harrisse to publish the correspondence mentioned above, thereby re-establishing the true facts of the case (*Christophe*

Colomb et Toscanelli. Revue Critique, 9th October 1893). I ought to add that, notwithstanding all that has been said and printed on this subject, M. Simon de La Rosa, the compiler of the Catalogue of the Colombina Library (*Catálogo*, vol. I., p. 52), M. Cesáreo Fernández Duro, the Perpetual Secretary of the Academy of History of Madrid (in a private letter), and M. Cesare de Lollis, the Secretary of the Royal Commission which published the *Raccolta Colombiana* (*Autografi di Christoforo Colombo*, preface, p. xiii.), continue to consider Señor Velasco as the first discoverer of the Latin text in question.

Mr Harrisse is of opinion that this text was written in the volume in the Colombina, where it now is, by Columbus himself (*Fernand Colomb*, etc., p. 89, and *The Discovery*, etc., p. 380). The author of the present work has some doubts on this point. See note 157.

The Latin text of the Colombina, containing many abbreviations often difficult to decipher, is not preceded by the covering note from Toscanelli to Columbus as given by Las Casas and the *Historie*. After the date comes a paragraph of a dozen lines generally known as the *Post-Scriptum*. Toscanelli's name is not mentioned.

(*a*) Facsimile Reproductions.

Harrisse.—*Don Fernando Colón historiador de su padre*. Seville, 1871, in 4to, p. 73.

Raccolta Colombiana.—Part I., vol. III.: *Autografi di Colombo*, by Signor de Lollis. Rome, 1892, in fol. Pl. LXIII.; with Special Translation showing in different type where abbreviations in the original have been printed in full.

—— Part V., only volume: *Vita e i tempi di P. dal P. Toscanelli*, by Signor G. Uzielli. Rome, 1894, Pl. IIII., p. 570.

Lazzaroni.—*Christoforo Colombo*. Milan, 1892, in 4to, p. 42.

BARATTA.—*Paolo dal Pozzo Toscanelli*, etc. *Bull. Soc. Géogr. Italiana*, vol. XI., Rome, 1898, p. 246.

(*b*) COPIES AND REPRODUCTIONS.

HARRISSE. — *Biblioteca Americana Vetustissima. Additions.* Paris, 1877, pp. xv.-xviii. ; with the abbreviations.

—— *Fernand Colomb*, 1882. Appendix VI., pp. 178-180, and *The Discovery*, Paris, 1892, pp. 381-384 ; with the abbreviations in full.

FISKE.—*The Discovery of America.* New York, 1892, vol. II., Appendix A, pp. 572-578 ; with the abbreviations in full and the corresponding Italian text in parallel columns.

GAFFAREL.—*Histoire de la découverte de l'Amerique.* Paris, 1892, t. II., pp. 28 *et seq.*

RACCOLTA COLOMBIANA.—Part V., only volume. (Toscanelli), Rome, 1894, pp. 571-572. Part I., vol. II., p. 364. *Ibid.*, vol. III., Pl. LXIII.

ASENSIO.—*Cristóbal Colón.* . . . Barcelona, 1892, 2 vols., in fol., t. I., p. 250.

II.—THE ITALIAN TEXT.

This version, the only one that was known for a long time, first appeared in chapter viii. of the history of Columbus attributed to his son Ferdinand (*Historie del S. D. Fernando Colombo*, etc., Venice, 1571), a work, says the title, translated from the Spanish manuscript. It is therefore the translation of a translation ; but, as it comes from the son of Columbus, who alone seems to have been acquainted with the Latin original, this circumstance gives it a value which has not been destroyed by the discovery of the primitive text. As in the Latin, Toscanelli is only mentioned by his Christian name, Paolo. It is preceded by a covering note from Toscanelli to Columbus, the original

text of which has not yet been found. The *Post-Scriptum* is lengthened by a transposition, and the letter itself contains many interpolations and some suppressions.

Reproductions.—Most of the modern works which reproduce this text either mutilate or *arrange* it. Even Signor de Lollis has not escaped this mania ; the text of this letter he gives in his *Christoforo Colombo*, Milan, 1892, is treated in like facile style. An exact transcription, with numerous and learned notes, will be found in Ximenes : *Del Vecchio et nuovo gnomone fiorentino*, Florence, 1757, in 4to, pp. lxxxi.-xcvi. ; in Fiske : *The Discovery of America*, vol. II., pp. 571-578, and in the *Raccolta Colombiana*, vol. on Toscanelli, pp. 574-575.

III.—The Spanish Version of Las Casas.

The version known under this name is not by Las Casas, who, in giving it in his *História*, etc., Madrid, 1875 (Book I., chap. ii., vol. I., pp. 92 *et seq.*), declares that he had it with other papers written by Columbus. Its origin is not known ; it differs, however, from the Latin text as well as from the Italian by several changes and some interpolations which Mr Harrisse (*The Discovery*, p. 381) thinks have been borrowed from Toscanelli's map, which also formed part of Columbus' papers, and which, like all the maps of the period, must have contained explanatory legends.

This Spanish text, like the Italian, is preceded by the covering note from Toscanelli to Columbus, and is followed by a second letter from the Florentine scholar to the great Genoese. Its source gives it some value. It is reproduced in the *Raccolta Colombiana,* vol. on Toscanelli, pp. 572-573.

IV.—Spanish Version in the City Archives of Seville.

This version which has been published in the *Documentos*

ineditos del Real Archivo de las Indias, t. XIX., p. 451 *et seq.*, comes from the Archives of Seville. I do not know its source; it appears to have been somewhat modernised and presents some variants with the other versions.

V.—Spanish Version of Barcia and of Navarrete.

Barcia made it on the Italian translation of the *Historie*, and published it, in 1749, in the first volume of his *Historiadores*, p. 5. Navarrete reproduced it in his collection of *Viages*, vol. II., p. 1 *et seq.* It is about the only version known in Spain, and Humboldt, unfortunately for him, had seen no other, for it has led him into grave mistakes, into which Sir Clements Markham has also fallen.

VI.—English Translations.

Churchill.—1732.—*Collection of Voyages and Travels*, etc. London, vol. II., pp. 567-569.

This is an exact rendering of the Italian text. It has been reproduced in the Pinkerton Collection, London, 1812.

Kettell.—1827.—*Personal narrative of the 1st voy. of Columbus.* Boston, in 8vo, note I, p. 268.

A translation from the Italian text.

Becher.—1856.—*The Landfall of Columbus.* London, pp. 183-185.

A translation from Barcia's Spanish text.

Yule.—1866.—*Cathay*, etc., London, vol. I., pp. cxcvi.-cxcvii.

A partial translation, made on the Italian text.

Harrisse.—1892.—*The Discovery*, etc. Paris and London, pp. 381-384.

An excellent translation, made on the Latin text, which is printed opposite.

FISKE.—1892.—*The Discovery*, etc. Boston, vol. I., pp. 356 *et seq.*

A good translation, made on the Latin text.

MARKHAM.—1893.—*The Journal of Ch. Columbus. Hakluyt Society*, London, pp. 3-9.

An excellent translation, made on the Latin, with notes.

PAYNE.—1892.—*History of the New World*, etc. London, vol. I., pp. 102-105.

An exact translation from the Latin, with some notes.

BROWNSON.—1890.—*The Life of Ch. Columbus. Translated from the Italian of Tarducci*, vol. I., Ch. xi.

A translation made on the Latin text.

VII.—FRENCH TRANSLATIONS.

COTOLENDY.—1681.—*La vie de Cristofle Colomb . . . composée par F. Colomb et traduite en français.* Paris, 1681, 2 vols. in 12mo, t. I., pp. 21-27.

An inexact translation of the Italian text.

BUACHE.—1806.—*Mémoire sur Antilia* (*Mémoires de l'Institut*, classe de littérature, vol. VI., 1806), pp. 1-39.

An incomplete and inexact translation from the Italian text.

URANO.—1824.—*Histoire de Christ. Colomb.* (Bossi's translation.) Paris, pp. 196-200.

An incomplete and inexact translation from the Italian text.

GAFFAREL.—1892.—*Hist. de la découverte de l'Amérique.* Paris, vol. II., pp. 28-33.

An exact translation, somewhat free, made on the Latin, which is reproduced in a note.

MÜLLER, Eug.—1879.—*Hist. de la vie et des découvertes de Christ. Colomb*, par Fernand Colomb, traduction de l'Italien. Paris, pp. 26-29.

An incomplete and inexact translation.

BELLY, F.—1867.—*A travers l'Amérique centrale.* Paris, 2 vols. in 8vo, vol. I., pp., 12-14.

A translation of the Italian text. Several sad blunders disfigure this translation, which is as a whole made with great care.

II.—OTHER SOURCES OF INFORMATION.

LAS CASAS.—1552-1559.—*História generál de las Indias*, etc. Madrid, 1875, Book I., ch. xii., vol. I., pp. 92-96.

FERDINAND COLUMBUS.—1539-1571.—*Historie*, etc. Venice, ch. vii. and viii.

III.—BIBLIOGRAPHY.

XIMENES, LEONARDO.—1757.—*Del Vecchio et nuovo gnomone fiorentino*, Florence, in 4to, pp. lxxiii.-xcviii. and *passim.*

BARROS E VASCONCELLOS.—1758-1898.—Lettre à Messieurs les auteurs du *Journal des Savants* sur la navigation des Portugais aux Indes orientales, par José Joaquim Soares de Barros e Vasconcellos, de l'Académie des sciences de Prusse, etc., réimprimée en commémoration du centenaire de l'Inde (by Antonio de Portugal de Faria), Leghorn, typography of Raphael Giusti, 1898, in 8vo, p. 20.

The author of this reproduction was of Barros' family, and gives a biographical notice of him at the end of the pamphlet.

This letter, which first appeared in the old *Journal des Savants* (January 1758), is a criticism of Ximenes' remarks on Toscanelli's letter. In these remarks the astronomer is considered as having pointed out to the Portuguese the road to the East Indies. Barros e Vasconcellos shows that Toscanelli was a stranger to this great event as well as to the inauguration of the spice trade.

MUNOS.—1793.—*História del Nuevo Mundo.* Madrid, vol. I., Book II., in 8vo, p. 17.

LAMPILLAS.—1778.—*Saggio storico apologetico della letteratura spanuola*, etc. Genoa, 1778-1781, 6 vols. in 8vo, 1st part, t. II., pp. 143 *et seq.*

TIRABOSCHI.—1772-1781.—*Storia della letteratura Italiana.* Edit. of Florence 1807, t. VI., part I., pp. 216 and 237.

BOSSI.—1818.—*Vita di C. Colombo.* Milan, French edition, Paris, 1824, pp. 10, 134-137, 323, 333-334, 337-343.

ANGELIS.—1826.—Article *Toscanelli* in *Biographie Universelle.* (Michaud.) 1st and 2nd editions. Worthless.

BALDELLI.—1827.—*Il Millione,* vol. I., pp. lv.-lxi.

WASHINGTON IRVING.—1828.—*Life of Columbus.* London, vol. I., ch. vi.

HUMBOLDT.—1836.—*Examen critique*, etc. Paris, vol. I., pp. 207-256; vol. II., p. 175.

HUMBOLDT.—1855.—*Cosmos.* Paris, vol. II., pp. 317, 325, 563, 566-568.

LELEWEL.—1855.—*Géographie du moyen âge.* Brussels, vol. II., pp. 107-130.

D'AVEZAC.—1848.—*Iles de l'Afrique.* Paris, 2nd part, pp. 25-36.

IBID. 1868.—*Les Voyages d'Americ Vespuce.* Paris, etc., p. 133.

IBID. 1871.—*Congrès des sciences géographiques d'Anvers.* Antwerp, vol. II., p. 3.

IBID. 1873.—*Canevas chronologique de la vie de Colomb.* Paris, in 8vo, p. 50, note.

IBID. 1873.—*Le livre de Fernand Colomb.* Paris, in 8vo, pp. 45, 46.

IBID. 1893.—*Toscanelli*, No. 1, January 1893, pp. 4-7.

HARRISSE.—1871.—*Don Fernando Colón,* etc. Seville, 1871, *passim.*

HARRISSE.—1872.—*Fernand Colomb.* Paris, pp. 88-90.

IBID. 1884.—*Christophe Colomb.* Paris, vol. I., p. 328.

IBID. 1892.—*The Discovery.* Paris, pp. 378-385.

IBID. 1893.—*Christophe Colomb et Toscanelli.* Paris, 1893, in 8vo, p. 12. From the *Revue critique*, Oct. 1893.

FISKE.—1892.—*The Discovery*, etc. Boston, vol. I., pp. 355-376.

MARKHAM.—1892.—*Christopher Columbus.* London, pp. 30-31.

IBID. 1893.—*The Journal of Ch. Columbus. Hakluyt Society.* London, Introduction, pp. ii.-iv.

TARDUCCI.—1890.—*The Life of Columbus.* Detroit, vol. I., ch. vi.

WINSOR.—1889.—*Narrative and Critical History of America.* Boston, vol. I., p. 51 ; vol. II., pp. 30-31, 101.

IBID. *Christopher Columbus.* Boston, pp. 7, 108-111.

J. DE LA GRAVIÈRE.—1890.—*Les Anglais*, etc. Paris, vol. I., pp. 224-225.

BARATTA.—1898.—*Paolo dal Pozzo Toscanelli iniziatore della Scoperto dell' America.* (*Bull. Soc. géogr. ital.*, Rome, series III., vol. XI., 1898, pp. 246-255.)

CHAPTER I

ADVICE ATTRIBUTED TO TOSCANELLI AS TO THE ROUTE TO THE INDIES BY THE WEST.

I.—CANON MARTINS' REQUEST.—Long before 1474, says Humboldt, Toscanelli had suggested to the Portuguese Government the route Columbus followed.[1] This assertion, which is found under various forms in the works of responsible authors,[2] rests solely on a letter that a Florentine astronomer, Toscanelli, is supposed to have written to a

[1] Humboldt: *Examen critique*, vol. I., p. 227. A few lines above Humboldt says: "It remains uncertain which of the two, Columbus or Toscanelli, first saw the possibility of this new way open to the navigation of India," p. 226.

[2] "More than twenty years before the discovery of America by Columbus, the Portuguese were employed seeking a westward passage to reach the Indies" (Santarem, *Recherches historiques sur Americ Vespuce*, pp. 240-241).

"It is certain that even before 1474 the Portuguese were thinking of reaching by sea the eastern shores of China and Japan" (Harrisse: *Les Corte-Real*, p. 23).—"The Portuguese were thinking for twenty years at least before Christopher Columbus' famous voyage of crossing the Atlantic Ocean westward" (*Ibid.*, p. 40).—See also the same author's *Christophe Colomb*, vol. I., p. 319.

"The letter to Martínez reveals the fact that as early as 1474 the notion that a westward route to the Indies had been suggested to Alfonso V" (Fiske: *The Discovery of America*, vol. I., p. 363).

councillor of King Alfonso, recommending to that prince the route to the Indies by the west, a copy of which letter was found among the papers of Columbus. If the assertion be well founded, if King Alfonso really formed the design of reaching the Indies by crossing the Atlantic, and for this purpose consulted the celebrated Florentine astronomer, we are in presence of a fact which fills an important place in the sequence of ideas whose development led to the discovery of the New World, and one to which too much attention cannot be paid.

In the terms of this famous letter a Lisbon Canon, Fernam Martins,[3] who entertained friendly relations with Toscanelli, and who filled an important personal post near King Alfonso V, had been commissioned by this monarch to obtain some information from his friend as to the possibility of reaching the East Indies by sailing to the west. We learn, by the letter, that this matter had already led to an exchange of views between Martins and Toscanelli, and that the latter had previously represented the western route to be much shorter than the one by the south-east. But it would appear that the king, who desired to attempt the enterprise, was not sufficiently documented, and Martins, returning to the question, requested further information from his correspondent, who hastens to give it.

II.—TOSCANELLI'S REPLY. — The learned astronomer begins by observing that, though he well knows the practicability of the route he suggests is demonstrated by the sphericity of the earth, he will make the matter clearer

[3] More frequently written Martínez, which is the Spanish form of the name ; Martins is the Portuguese form.

by means of a map, on which he has marked the coasts of Portugal and the islands whence one must sail directly west to the point of arrival, as also the route to follow, the distances to be covered, and the places where the ship may put in.

The comments wherewith Toscanelli accompanies the map are short, not very explicit, but calculated to excite curiosity.[4] He dwells upon the wealth of the countries in the East to which the road he indicates should lead; he calls attention to the great commercial activity of which the towns on the Asiatic coast are the centre, as also to the large numbers of ships and sailors, and the

[4] *The Marco Polo of Dom Pedro.*—Although Marco Polo is not mentioned in this letter, it is easy to see all, or nearly all, that is said therein of Eastern Asia comes from that traveller, whose account, although not yet published, circulated from hand to hand, and greatly occupied minds interested in distant countries. This remarkable account, which during the Fifteenth Century was in every mouth, and which had a powerful influence on the geographical movement of the period, was, it is alleged, well known to Alfonso V. In 1428, Alfonso's uncle, Dom Pedro, Duke of Coimbra, is said to have brought back from his voyages a copy received from the munificence of the Venitian Republic, which he greatly treasured. As bearing on this, let us mention that Oliveira Martins, who is by no means alone in stating this fact, quotes a passage from an official document, apparently of Alfonso V, wherein the story of this present to his uncle is confirmed (*Os filhos de Joao I*, p. 132, note). Nevertheless, we have not been able to find out the origin of this document, the source of which is not clearly indicated. Valentín Fernández, who published a Portuguese translation of Marco Polo at Lisbon in 1502, says in his preface, addressed to King Manoel, that he has heard it related Dom Pedro brought back from Venice a manuscript of Marco Polo, believed to be in the Torre do Tombo. "If that be true," he adds, "your Majesty must know better than any one." The last phrase shows that Fernández had never seen Dom Pedro's manuscript, even the existence of which seemed to him doubtful. Contrary, therefore, to

quantities of merchandise gathered in their harbours; he mentions with praise the Great Khan, or King of Kings,[5] who rules over all the region, and whose residence is chiefly in the Province of Cathay,[6] and he speaks

what Oliveira Martins, Uzielli, and many more have said, it was not on that copy Fernández made his translation. See Uzielli (*Toscanelli; Raccolta*), p. 162.

It has been said that some particulars in the letter to Martins were borrowed from the account of Nicolò di Conti, which might be known to Toscanelli. I see but one indication of this being so; but Conti's account was known at Lisbon by the partial translation Valentín Fernández made of it into Portuguese in 1502, in the same volume containing his version of Marco Polo.

[5] This personage played a considerable rôle in the imagination of the early discoverers. In the very first lines of his log-book Columbus recalls, in the same expressions found in Toscanelli's letter, that he had informed the Catholic Kings about the Great Khan, or King of Kings, and about the embassies that potentate had sent to the Pope (*Diario*, preamble). It is generally believed that Ferdinand and Isabella allowed themselves to be persuaded by what he told them on this subject, and that they addressed a letter to the Great Khan, which Columbus undertook to deliver, and that he actually endeavoured to get it to its destination when he reached Cuba, which he took to be a portion of the Kingdom of Cathay (*Diario*, 21st and 30th October 1492). See note 23 to the translation of the letter: Appendix A.

[6] *Cathay.*—This name which appears here for the first time holds a great place in geographical history from the Fourteenth to the Sixteenth Century. It appears to have been introduced into Europe by Jean Plan Carpin, and by the Brabantine monk, Rubruquis, or Ruisbrock (1253), who attributed it to ancient China of which it was the Mongol name. According to Yule, *Khitai* was the appellation of a Tartar people who conquered the north-east of China in the Eleventh Century, and founded there an Empire that was long prosperous. The Mongol invasions of the Thirteenth Century put an end to this Empire; but the name Khitai, corrupted into Cathay, stuck to China. M. Cordier

with admiration of the City of Zayton,[7] where every year a hundred vessels are laden with pepper, not to mention other cargoes.

The most important part of this letter is the Post-scriptum,[8] which indicates the distance to be traversed going from Portugal to the land of spices. From Lisbon to

derives the name from the *Kitan* Tartar dynasty, which comes to about the same thing. (See Yule, *Cathay*, vol. I., pp. cxvi. *et seq.*, and his *Marco Polo*, vol. I., Introduction, pp. 11 and 15. See also Cordier: *Atlas catalan*, p. 6).

In Asia the whole of China was commonly known by this name. In Europe the expression was sometimes taken in this sense, and at others it designated a kingdom or province of Northern China. Marco Polo uses it in the latter sense, and he calls the capital of this province *Cambalu* or *Koubalu*, otherwise *Khan-balik*, which signifies the town or abode of the Khan; it is now Peking. The expression was always somewhat vague; but in the Fifteenth and Sixteenth Centuries there was a tendency to push further to the north-east the region to which it properly belonged. It was thought Asia extended in that direction far beyond its actual limits, and that Northern China, or Cathay, spread over the desert steppes, scarce peopled by the Tchoutkis and the Kamchadales, but which were pictured as covered with flourishing cities. It is from this geographical idea that sprung the many efforts to discover a road to Cathay by the north-west and the north-east. The name Cathay did not survive the Mongolian power in the Far East, and finally disappeared; but in Europe the use of this name was long maintained.

[7] *Zaiton* or *Zayten* of Yule's *Marco Polo* (Book II., chaps. 81 and 82), now *Chang Chau* (see note 22 of the translation of the letter). The 1st November 1492, Columbus being abreast of Cuba, wrote: "I have in front of me Zayto and Guinsay" (*Diario*, 1st November 1492). The great commerce of Eastern Asia, says Humboldt, was in the Thirteenth Century divided between Quinsay and Zaiton (*Cosmos*, vol. II., p. 566.)

[8] A paragraph which in the Latin text comes after the date is so called. See the translation of the letter: Appendix A, note 30.

the superb city of Quinsay,[9] in the province of Mangi,[10] there are, going directly west, 26 spaces marked on the map, each space comprising 250 miles, or 6500 miles in all, making about one-third the circumference of the globe. But as from the isle of Antilia[11] to the famous isle of Cipangu[12] there are only 10 spaces, the unknown portion of

[9] *Quinsay* is the ancient capital of Southern China, now called Hang-chau (Vivien de Saint-Martin, Cordier), on the Tsin-Tankiang river, and is the capital of the province of Che-kiang. It is situated 30° 13′ north, and 120° 10′ east of Greenwich. Marco Polo gives a glorified account of it, and calls it the Celestial City. Yule and Cordier agree on the point that Quinsay is the Chinese word *King-see*, which means capital (Yule's *Marco Polo*, vol. II., p. 166, chaps. 76 and 77, and Cordier's *Atlas catalan*, p. 25.) Toscanelli says it has a circuit of 100 miles; Marco Polo says the same; but, whereas Toscanelli mentions 10 superb bridges, Marco Polo counts 12,000. Nicolò di Conti only gives Quinsay a circuit of 30 miles (Ramusio, vol. I., p. 340). See note 35 to the translation of the letter: Appendix A.

[10] *Mangi* or *Manzi*.—This is Southern China, of which Quinsay is the capital. In Marco Polo it is Manzi; in Chinese, Mang-Tse. (Pauthier's *Marco Polo*, p. 452, note 6). At his fourth voyage Columbus thought he had reached that province. (Letter from Jamaica, 1503.) See Appendix A, note 38.

[11] The writer of the letter does not indicate the distance of Antilia from the shores of Europe, because he presupposes it is known; but the omission may be easily supplied. We have shown elsewhere (Notice on *Antilia* in the work under press) that according to the cosmographical notions of Toscanelli's time this famous island would be found about 35° west of Lisbon. See Appendix A, note 40.

[12] *Cipangu*.—This is Marco Polo's Japan, which he calls sometimes *Zipangri*, at others *Zipangu*, a corruption of the Chinese name *Ji pen Koue* (Empire of the Rising Sun), whence comes the Japanese *Nippon*, having the same meaning. (Cordier: *L'extrême-Orient dans l'Atlas catalan*, Paris, 1895, p. 9.) This is one of the names that occurs most frequently in the works of the authors of the Fourteenth, Fifteenth, and even Sixteenth Centuries. Marvellous things were related about this island which, being situated before those producing spices, would be the first

the ocean to be crossed is not great; therefore, by bringing up at Antilia the Asiatic coast is easily reached. Thus, on these indications, the maritime space separating the two extremities of the world is far less in extent than the terrestrial space; in other words, by taking the ocean-way westward to the Indies the journey is much shorter than by the overland route eastward, or by the sea route to the south-east, for the first road extends to but 26 spaces—a third of the sphere—while the others comprise 52 spaces.[13]

III.—IMPORTANCE OF THIS CORRESPONDENCE IF AUTHENTIC.—One can see the consequences that follow from the existence of this correspondence between King Alfonso and Toscanelli. If from the year 1474, or rather before that date, for Toscanelli only returns to the question, Martins' correspondent had recommended the Portuguese King to cross the Atlantic direct westward in order to reach the Indies; if he had sent him a map on which was traced the road to be followed, and if he had accompanied this map with explanations pointing out this route as being shorter than the one to the south-east, known as the Guinea route, then it is clear it was the celebrated Florentine astronomer who showed the way to Columbus, and those were in the right who said that to him was due the

reached coming from the East, and Columbus thought more than once he had reached it. He first mistook Cuba and afterwards Hispaniola for it (*Diario*, 24th December 1492, and Las Casas *História*, vol. I., p. 361). Toscanelli, according to Las Casas (*loc. cit.*, vol. I., p. 360), gives it a circumference of 2400 miles, or 600 leagues. See Appendix A, note 41.

[13] For fuller details as to the extent Toscanelli attributed to the globe, see the second part: Toscanelli's Map.

honour of having taken the initiative in the discovery of America.[14]

Although the authenticity of this correspondence has never been called in question, it is far from being incontrovertible. History is full of events of which it may be said, as of many individuals, that they have been favoured by good luck. Long usage habituates us to them; passing from mouth to mouth, from book to book, they end by acquiring the right to historical citation, and we accept them

[14] "This monumental letter assures to Toscanelli the indisputed merit of leading his age to the discovery of the Transatlantic lands" (D'Avezac: *Canevas chronologique*, etc., 1872, p. 50, note.) The previous year, at the Geographical Congress at Antwerp (1871), the same critic had said that it was Toscanelli who "decided the vocation of Columbus, a vocation much later than is generally supposed" (*Congrès Géog. d'Anvers*, 1871, vol. II., p. 3). M. Uzielli has written a work to show that Toscanelli was the initiator of the discovery of America: *Paolo dal Pozzo Toscanelli iniziatore della Scoperta d'America*, Florence, 1892, in 12°. See also the same author's *Toscanelli*, No. 1, p. 1, and his monumental work on *Toscanelli*, forming vol. V. of the *Raccolta*.

More recently M. de Lollis thus expressed himself: "Toscanelli was the inspirer of Columbus in the sense that it was he who at first indirectly, and afterwards directly, suggested to Columbus and convinced him of the possibility of transatlantic navigation," (*Qui a découvert l'Amérique?* in the *Revue des Revues*, Paris, 15th January 1898). M. de Lollis had previously expressed himself in the same manner in his popular *History of Columbus*.

Speaking of the Toscanelli Letters, and of the map which went with it, Markham says: "They were destined to play so important a part in the conduct of the first voyage" (*The Journal of Columbus*, p. 111). "This Florentine doctor was the first to plant in the mind of Columbus his aspirations for the truths of Geography" (Winsor: *Christopher Columbus*, Boston, 1891, p. 499.) For Mr Payne the great undertaking of Columbus "was mainly influenced by the ideas of Toscanelli," and "partly inspired by other contemporary conditions" (*Hist. of the New World*, Oxford, 1892, vol. I., p. 107).

However, priority for this view belongs to Humboldt, see note 1.

without even imagining that they might be called in question. If facts, which by common consent take rank in all books of history, were submitted to a searching analysis, it would be surprising to find the number whose accuracy was anything but well established. Others, on the contrary, without being in the least more doubtful, find it hard to win belief. Criticism minutely dissects them, and pitilessly lays open all the defects which may, and which often should, place them under suspicion. The first voyage of Vespucci, to mention only a single instance, is a case in the second category; the letter of Toscanelli to Fernam Martins is an example of the former. Few documents have been more read, more studied, more often translated and expounded, than this famous letter; none has ever been more easily accepted.[15]

IV.—WHENCE CAME THE CORRESPONDENCE.—Before dealing with the question of the authenticity of this docu-

[15] It may be said its authenticity has never been discussed. The first, to my knowledge, who has lightly touched upon the subject is the Spanish Jesuit François-Xavier Lampillas. In his work, *Saggio storico apologetico della letteratura spanuola*, etc. (Genoa, 1778-1781, 6 vols., in 8°), he mentions it in a few words, but only superficially and nervously. (See First Part, vol. II., pp. 243 *et seq.*). Tiraboschi has replied to his remarks (*Storia della letteratura italiana*, vol. VI., part I., p. 189).

The second who has called attention to some of the extraordinary assertions in the letter to Martins is a Portuguese named De Barros e Vasconcellos, author of a letter on this subject sent to the *Journal des Savants*, and published in that collection for January 1758. Barros does not dare directly to call Toscanelli himself into question, but tackles his commentator Ximénes. M. Eugène Gelcich, Professor at Pola, in Austria, has been, it would appear, much bolder in a small volume we have not been able to see: *La scoperta dell'America*, Goritz, 1890. At a late meeting of the Americanists, M. G. de La Rosa plainly stated the letter to be apocryphal.

ment, let us recall how it first came to our knowledge. We have seen that, according to the terms in which it is written, King Alfonso would appear to have had the idea, at least as early as 1474, of going to the Indies by the west, and that Toscanelli, in order to give him some information on the subject, had written the letter in question to Fernam Martins, accompanying it with a map. Some years later, Columbus, having also formed the project of going to the Indies by the west, heard of the existence of this correspondence, and hastened to write to Toscanelli to ask his advice: it is then he is supposed to have received from Toscanelli a copy of his letter and map of 1474. Columbus, however, never mentioned taking this step, which we only know by Las Casas reporting it in a portion of his *História de las Indias*, written or revised towards 1552. It is in this work that first appears the correspondence of Toscanelli with Columbus, but in the form of a Spanish translation, whose author Las Casas does not name.

In 1571 there was published at Venice, in Italian, a life of Columbus, attributed to his son Ferdinand, translated ostensibly from a Spanish manuscript known only to the translator, in which was given an Italian version of the letter to Martins, with the statement that it had been written in Latin, that it was accompanied by a map, and that these documents had greatly influenced Columbus. For three centuries the letter to Martins was known only by this Italian version, although the manuscripts of Las Casas, which contain a Spanish version, were accessible to scholars. In 1871 Mr Harrisse discovered in the Colombina, in a volume which had belonged to Columbus, a copy of the Latin text of the letter, in the supposed handwriting of Columbus

himself. A few years later, in 1875, the entire text of Las Casas, until then unpublished, was given to the public.

V.—SUPPOSED RELATIONS BETWEEN COLUMBUS AND TOSCANELLI.—We see by what precedes, and we shall see more clearly by what follows, that it is only because Columbus is supposed to have received from Toscanelli a copy of his letter of 1474 that we hear of that document. It is, therefore, necessary to set down carefully what we know of the relations which are thus supposed to have existed between the great navigator and the distinguished Florentine astronomer. It works out at very little. Las Casas and Ferdinand Columbus, who alone mention[16] the fact, simply say that, when Columbus was thinking of putting into execution his great design, he learned that Messire Paolo, physician, had written on the same subject to a Canon of Lisbon, named Martins; and that, through a Florentine merchant dwelling at Lisbon,[17] he wrote to acquaint Toscanelli with his project, and sent with his letter a small explanatory sphere. Messire Paolo, that is to say, Toscanelli, is supposed to have replied to Columbus, encouraging him and sending him for his information a copy of the letter he had formerly sent to Martins, as well as a duplicate of the map which had accompanied this letter.[18]

[16] Las Casas' *História*, Book I., chap. xii., vol. I., p. 92.—*Historie*, fol. 15. The two accounts are written exactly in the same terms, and are evidently copied one from the other.

[17] Lorenzo Birardo according to Las Casas; Lorenzo Girardi according to the *Historie* (*loc. cit.*).

[18] This first communication from Toscanelli to Columbus does not contain more than a dozen lines; it is a mere covering note with his letter to Martins. Of it we only possess a Spanish version, coming from

It is supposed Columbus wrote several times to Toscanelli; at any rate we have a letter attributed to the Florentine master which is considered to be a reply to another communication from Columbus. In it Toscanelli rejoices that his map has been understood; he repeats that the projected voyage is certain to succeed; and he persuades Columbus to persevere, by laying stress on the commercial advantages which will result from the undertaking, and on the desire the princes of the rich countries to which he is going have to enter into relations with the Christian nations.[19]

Neither Las Casas nor Ferdinand Columbus gives the slightest indication as to the date of this correspondence, for, although the letter to Martins is, as we have seen, dated 1474, the covering note from Toscanelli and his second letter to Columbus are undated. This absence of any date to documents which are thought to have exerted a decisive influence on the life of Columbus has puzzled the critics, who have sought to supply this deficiency from information obtained from the pieces themselves. At first it was held that the correspondence between Toscanelli and Columbus took place at the very period Toscanelli was writing to Martins. An expression used in the note to Columbus enclosing a copy of the letter written to Martins—*ha dias*, which literally means *it is some days*—had given rise to this opinion, which had the high sanction of Humboldt. But

Las Casas, and an Italian version given in the *Historie*. See Appendix E.

[19] Like the former note, this letter is undated: we have two versions of it—one Spanish, the other Italian—which are respectively given by Las Casas and the *Historie*. See Appendix E.

everyone is now agreed that this expression must not be read in its strict and literal sense, and that it really means many days—a long time—instead of some days only.[20]

[20] *Ha dias.*—The original Latin text of this note being lost, we can only seek in the Spanish and Italian versions for the meaning of the phrase referring to the date when it was written, these versions having been made while the Latin text was supposed to be still existing. "In reply to your letter I send you the copy of the one I wrote, *algunos dias ha*," says the Spanish, "*alquanti giorni fa*," says the Italian. Literally, *algunos dias ha* means "it is some days," and it is thus Humboldt translates the phrase (*Examen critique*, vol. I., p. 224); and Fiske, relying upon this great authority, as also upon the Italian version, which has exactly the same meaning, likewise renders it "a few days ago" (*The Discovery of America*, vol. I., p. 363). Sir C. Markham translates it the same way (*The Journal of Columbus*, p. 3), as also does Mr Winsor (*Christ. Columbus*, p. 108). Others, widening the literal sense, have made it "there is some time," nevertheless implying that the correspondence took place the very year Toscanelli wrote to Martins, that is to say, in 1474. Among these we may name Baldassare Colombo, Navarrete, Ximenes, Cladera, Tiraboschi, W. Irving, Bonnefous, Roselly de Lorgues, Hoeffer, Major, Sanguinetti. These scholars never anticipated it would be discovered, later on, that in 1474 Columbus had not yet left Genoa.

In his article in the *Revue critique* for 1893, p. 8, on *Christophe Colomb et Toscanelli*, Mr Harrisse states the question in its true sense by showing that *Ha dias* does not mean "it is some days," but "it is many days, it is a long time," and he supports this assertion by several examples. Here are some other quotations which will leave no doubt as to the true meaning of this idiom:—*Y sera forzoso que me digan dias ha que nos conocimos*, "It is necessary I should be told that it is a long time we have known one another" (Quevedo in the *Diccionario de la lengua Castellana*. . . . Madrid, 1726-39, 6 vols. fol., vol. III., p. 256, col. 1). *Dias ha*, "there is a long time" (Oudin: *Tesóro de las lenguas francesa y española*, Paris, 1607). Oviedo, speaking of transatlantic voyages, says that "no pleasure equals that of persons who have been long at sea," *los que ha dias que navegan*, "when they again see land." (*História Generâl de las Indias*, t. I., p. 24, col. 2.) Finally, we find an example in Columbus himself which decides the question. In his letter of the 7th July 1503, he recalls that the Emperor of Cathay has

It is therefore some years at least after writing to Martins that Toscanelli is supposed to have corresponded with Columbus. But how long afterwards? Another phrase in the covering letter to Columbus has been thought to throw some light on this point. Toscanelli says it was before the wars of Castile that he sent his views to Martins; this may be exact, for this communication is dated the 25th June 1474, and it was not till May 1475 that Alfonso decided to invade Castile. But the use of the words "before the wars of Castile" presupposes that when they were written these wars were over. Now, though the battle of Toro, lost by Alfonso in 1476, interrupted hostilities, the war did not end till the 4th September 1479, the date of the treaty of peace between the two countries. Toscanelli, if he ever wrote to Columbus, did not therefore do so until after the 4th September 1479;[21] and if, as Las Casas and Ferdinand

requested *ha dias* learned men should be sent to instruct him in the Catholic faith. Now Columbus here alludes to the Embassy Kublai Khan entrusted to the Polos, which embassy Marco Polo mentions in his Seventh Chapter. It therefore dated from 200 years before, as is indicated in the letter to Martins where the fact is recalled.

Thus Columbus uses *ha dias* to express when a fact took place, although he knew it had happened 200 years ago.

[21] *Date of Columbus' relations with Toscanelli.*—This demonstration, simple and self-evident though it be, has not occurred to all the critics, although D'Avezac made it as early as 1872 (*Canevas chronologique*, etc., pp. §2-§3). Mr Harrisse himself, who returns to this point several times, only saw the true solution at the very last. In 1872 he considered the phrase "before the wars of Castile" might mean wars not yet finished; and he assigns the correspondence of Columbus with Toscanelli to between the years 1475 or 1476 and 1479 (*Fernand Colomb*, p. 92). In 1884, in his *Christophe Colomb*, he seems to retract this view by saying that it is some time after (the 25th June 1474) that Toscanelli wrote to Columbus (vol. I., p. 249). Further on, at page 328, he corrects himself, and extends to 1482 the period within which Toscanelli might have

Columbus say, it was the advice and suggestions the celebrated astronomer sent the discoverer that decided his mind as to the journey he was contemplating, we cannot place the correspondence alleged to have occurred between them earlier than 1480, or even the following year.[22]

corresponded with Columbus. In 1892, in his *Discovery*, p. 380, and in 1893, in the *Revue critique* (*Colomb et Toscanelli*, p. 8), he gives the phrase its true value, "after the treaty of 1479." These variants in a critic so well armed as Mr Harrisse show that the simplest truths are not always to be seen at the first glance. For instance, Mr Fiske, who ranks deservedly high among critics, and who thoroughly knew all that has been written on this subject, finds that the phrase "before the wars of Castile" does not refer to the war of Succession of 1475-1479, the only war which then occurred between Castile and Portugal, but to the civil wars which disturbed Castile from 1465 to 1475. Mr Fiske has devoted to this small question a three-page note of small type, wherein he unfolds learning of the most singular character (*The Discovery of America*, vol. I., pp. 365-368.) It is to be regretted Sir C. Markham shared this erroneous view (*Journal of Columbus*, p. 4). This question has been very judiciously handled by M. de Lollis in *Scritti di Colombo* in the *Raccolta Colombiana*, p. ccii. *et seq.*

[22] D'Avezac thinks it is probably about the accession of Joao II that should be placed the relations between Columbus and Toscanelli (*Canevas*, p. 53). Peschel places this correspondence towards the end of the year 1479 and the middle of 1481 (*Zeitalter der Endeckungen*, p. 110). M. de Lollis is more precise ; according to him, it is between the month of September 1479 and the month of August 1481 that Columbus wrote to Toscanelli (*Qui a découvert l'Amérique ?* in the *Revue des Revues*, 15th January 1898 ; and in *Scritti di Colombo*, "*Raccolta Colombiana*," p. ccvii.)

CHAPTER II

REASONS FOR DOUBTING THE GENUINENESS OF THE ALLEGED CORRESPONDENCE OF TOSCANELLI WITH MARTINS AND COLUMBUS.

I.—THE TEXTS HAVE DISAPPEARED.—From the preceding recital it follows that there were three autograph copies of Toscanelli's letter to Martins: the one sent to him, the one Toscanelli sent to Columbus, and the one he evidently kept by himself, since he was able to make copies; not one of these original texts or copies has been found. It is the same with Columbus' letter to Toscanelli to which the latter is supposed to have replied: neither among the papers of the Florentine astronomer, nor among those of the great navigator, has a single trace of it been found. Furthermore, it must be stated that the very fact of the existence of a correspondence between Toscanelli and Columbus rests only on the unequal evidence of two witnesses; that of Las Casas and Ferdinand Columbus, one of whom merely copies the other, as will be shown.

II.—THE LETTER TO MARTINS IS UNKNOWN TO THE PORTUGUESE.—As regards the letter to Martins the very

terms of which indicate it was not the only one Toscanelli wrote to the supposed confidant of King Alfonso upon the same subject, it, as also those which had preceded it, is unknown to all the Portuguese writers of the time. No mention of it is made either in the documents of the period or in the books of that day, unless written from information drawn from purely Columbian sources. The very name of the Florentine astronomer is ignored by all the chroniclers who have dealt with Alfonso V and Joao II. Ruy de Pina, who lived at the date this correspondence is said to have taken place, who became custodian of the Royal Archives, and who wrote the history of King Alfonso, nowhere mentions the name of Toscanelli. Resende, who occupied a confidential post near Joao II, and who was certainly well acquainted with everything that took place towards the close of King Alfonso's reign, during which Joao was in fact in power, is equally ignorant of the celebrated astronomer. The intention to seek a new route to the East Indies, alleged by this correspondence to have been entertained by King Alfonso, is also as unknown to the documents and Portuguese authors as was the name of the learned man who is supposed to have been the promoter of that project. Not one of the papers forming the vast and rich collection of the Torre do Tombo, remaining intact to our days, has been found containing any reference to that matter. Not only so important a fact of having conceived such a scheme, and of being so interested in it as to seek abroad for information as to the method of executing it, has left no trace in the documents, but it had also faded from every memory; for when in 1493, Columbus, returning from the discovery of

the New World, presented himself triumphantly before King Joao II, not a soul thought of recalling this circumstance. It is, nevertheless, clear that Barros, who is unfavourable to Columbus, and who with difficulty finds excuses for King Joao II having refused to listen to him, would not have failed to say that the Portuguese knew of the project before him, had he been aware that Toscanelli had already proposed it to King Alfonso; and, if this were so, how came it that Barros ignored it?

III.—MARTINS IS AN ABSOLUTELY UNKNOWN PERSONAGE.—This complete silence upon such a scheme, which could not have been formed and organised in the dark, is not the only remarkable thing that has to be noticed respecting this correspondence between Alfonso and Toscanelli. Fernam Martins, the individual charged by the king to consult the learned Italian, is also as unknown to the documents and Portuguese authors as the fact of the correspondence carried on by his instrumentality. Among all the Lisbon Canons of the time of Alfonso who can be traced, his name does not appear. It is nowhere to be found.[23] Yet he must have been a personage of some

[23] I am indebted for this observation to my learned friend Señor G. de La Rosa, who, with the industry of a Benedictine, has ransacked all the documents of the period, all the chronicles and old works in which a record of this nature might have been entered, without finding a trace of the Lisbon Canon, Fernam Martins, who was Alfonso's contemporary. It must nevertheless be remarked that King Alfonso had a chaplain named Martyns who accompanied him to France, and who was thoroughly in his confidence, for it was to him he confided his resolve never to return to Portugal, but to proceed incognito to Rome in order to enter religion (Ruy de Pina, *Chron. Aff. V.*, chap. cciii., p. 582). But this Martyns was called Estevam, not

importance, for Toscanelli congratulates him that he occupies a confidential post near the king.[24]

IV.—TOSCANELLI'S PLAN IS UNKNOWN IN ITALY.—It is not only in Portugal that this correspondence and the

Fernam; and, moreover, he was not a Canon. It may be noticed that one Fernando Martínez, a servant (*criado*) of Columbus, figures among the witnesses to his will, dated the 19th May 1506 (Navarette: *Colec. Viages*, vol. II., p. 315).

But, even should it be proved that a Fernam Martins had existed, it would not be evidence that Toscanelli had written to him the letter of the 25th June 1474. If that letter is apocryphal, it is highly probable that the author of the forgery, in order to make it appear more genuine, would have selected as correspondent for the learned Florentine a person who really lived in 1474, and from whom a repudiation was no longer to be feared.

[24] *Martins and Roriz.*—There is a passage in the Italian text of the letter to Martins which gives the impression that he and Toscanelli had had personal relations; and, as Toscanelli was never in Portugal, it is supposed it was Martins who went to Italy, where he formed an acquaintance with Toscanelli, and, it is even added, became his friend. M. de Lollis affirms this after M. Uzielli (*Qui a découvert l'Amérique?* in the *Revue des Revues*, 15th January 1898, p. 148). On what is this assertion based? Simply on the fact that at the bottom of the will of Cardinal de Cusa, who died on the 6th August 1464, is found the signature of Toscanelli side by side with that of one Fernando de Roriz, who is described as being a Canon of Lisbon, and in this person is believed to have been found the correspondent and friend of Toscanelli. M. Uzielli, who is the author of this conjecture (*P. dal P. Toscanelli*, Florence, 1892, p. 212; and *La Vita e tempi di P. dal P. Toscanelli*, *Raccolta*, part V., t. I., pp. 261-263), remarks that it is a custom in Spain and Portugal to bear several names, and this habit authorises us to believe that the full name of this witness was Fernando Martínez de Roriz. We may well ask why this Roriz should, contrary to all custom, sign a will with only a part of his name! M. Uzielli, however, believes that "until the contrary be proved," the identity is established. His friend, M. de Lollis, is evidently of the same opinion.

scheme which led to it have left no trace; it is the same in Italy. Not a line on the subject has been found among the papers of Toscanelli; no map or writing whatever has been discovered which indicates that he had troubled himself about the road to the Indies or crossing the Atlantic. The contemporaries and friends of Toscanelli are equally mute on the subject. Yet Florence, at the time Toscanelli lived, was an artistic, literary, and scientific centre, and Toscanelli dwelt there amid a group of literary men and scholars, who must have known if he had occupied himself with this question.

An indication that the correspondence of Toscanelli with Martins or Columbus was known in Italy has been seen in the fact that Duke Hercules d'Este, on hearing of Columbus' discovery, immediately instructed his ambassador in Florence to inquire of Toscanelli's nephew, who had inherited all his uncle's papers on his death twelve years before, whether among those documents there existed any notes referring to the islands which had just been discovered for Spain.[25] The nephew's reply is unknown; but it is certain that he found nothing, for nothing referring thereto has ever been produced. That Duke Hercules should have taken this step is certainly remarkable, and the circumstance might seem to furnish a proof that Toscanelli himself had spoken of his relations with Columbus. Still, there does not exist among the contem-

[25] The letter in which Duke Hercules charged his ambassador, Manfredo Manfredi, with this commission, is dated Ferrara, 26th June 1494. It was found by M. Uzielli, who has published it in his *Epistolario Colombo Toscanelliano e i Dante*, Rome, 1889, in 8°, pp. 33-34. It is also found in the *Raccolta Colombiana: Fonti Italiane*, vol. I p. 145.

poraries of the great astronomer a single trace that any such intercourse had taken place. Might the Duke's ambassador, in Portugal or Spain, have learnt from someone in touch with Columbus that he claimed to have been in correspondence with Toscanelli? That is possible; yet it would not prove the authenticity of the correspondence, for at that period Columbus, or one of his family, may have wished to lean on the authority of such a personage as Toscanelli, who had then been long dead. In all this there is evidently an obscure point which, perhaps, creates a presumption in favour of the authenticity of the correspondence.

Nevertheless it remains that Duke Hercules was the sole person whom the rumour reached that Toscanelli had occupied himself with transatlantic discoveries; while many others, infinitely more advantageously placed for learning the fact, had never heard a word upon the subject. First among these must be mentioned Pietro Parenti, who, under the date of March 1493, records in his Chronicle Columbus' discovery, and adds the remark that some persons pretend there were indications of the existence of the newly found regions in a certain map in the possession of Cardinal Bessarion, Archbishop of Nicæa.[26] This chronicler, like Toscanelli, was a Florentine; he had been his contemporary, seeing he was Prior of the *Signoria* from 1482 to 1502,[27]

[26] John Bessarion died in 1472. He had lived in Italy on terms of intimacy with the Popes and all the lettered men of his day. He was himself a man of vast learning, and a great collector of manuscripts and books.

[27] See M. Uzielli's note, in his *Toscanelli*, No. 1, p. 34, on this personage and the map he mentions.

and he had talked with persons who discussed the discovery of Columbus, for he speaks of a map which they quoted, and yet he knew neither Toscanelli's interest in the subject nor his map.

Among others may be mentioned Ambrogio Camaldolese,[28] the Superior of the Convent degli Angeli, where gathered a group of scholars, including Toscanelli, who was Ambrogio's intimate friend: Francesco Berlinghieri,[29] who published a curious geography in verse just at the time Toscanelli died: Marsilio Fisino,[30] who has left so many works on Plato, and who speaks of Atlantis—when, surely, was the occasion to mention the project attributed to Toscanelli: Dati, who published at Florence itself, and but very shortly after the return of Columbus, his poem on the discovery of the New World, wherein he speaks of a multitude of things, always excepting the conception of his townsman and contemporary, which had led to this discovery:[31] Vespasiano da Bisticci, the learned Florentine bookseller, who saw all the lettered men of the town, and who has left a history of the worthies of Florence, wherein figures Toscanelli; but not a word is said as to his opinion on the route to the Indies: Zaccaria Lilius, the author of a geography where one might expect to find some mention of the

[28] Ambrogio Traversari, General of the Religious Order of the Camalduli, whose name is always joined to his, was born in 1386, and died in 1439, when Toscanelli was forty-two years of age.

[29] *Geographia di Francesco Berlinghieri*, Florence, Nicola Todesco, 1480(?)

[30] Marsilio Fisino, born in 1433, died in 1499. His works were collected and published at Basle in 1561.

[31] Giuliano Dati, born in 1445, died in 1524.

matter:[32] the learned Cardinal de Cusa,[33] a great friend of Toscanelli, of whom he speaks with praise: Christoforo Landino,[34] the tutor of Lorenzo de' Medici, who left voluminous commentaries on Dante and Virgil, wherein many things are treated, including the interest Toscanelli took in information respecting the Far East, but not one word of his cosmographical notions: Alberti,[35] the learned architect: Machiavelli: Poliziano,[36] the author of many works and writings, among which occur letters to the King of Portugal: Pico della Mirandola:[37] Beroaldo:[38] and so many other scholars and *literati* who personally knew Toscanelli or lived beside him, and who mostly have mentioned him, but not one of whom has ever said a word about his geographical ideas, of the opinions he had formed as to the route to the Indies, and of the map he had drawn up to point out that route.

V.—THE PUBLICATION IN THE *HISTORIE* OF TOSCANELLI'S LETTERS (1571).—Before the publication at Venice, in 1571, of the small work bearing the name of Ferdinand Columbus, it was not therefore suspected that the great navigator and the great astronomer had been or could have been in epistolary correspondence. It was by the publication of the *Historie*, and by that alone, that the learned world became acquainted with those relations.

[32] Zaccaria Lilius: *Orbis breviarium*, etc., Florence, 1493.
[33] Born in 1401, died in 1464.
[34] Cristoforo Landino, born in 1424, died in 1504.
[35] Leone Battista Alberti, born in 1404, died in 1484.
[36] Angiolo Poliziano, born in 1454, died in 1494.
[37] Giovanni Pico della Mirandola, born in 1463, died in 1494.
[38] Beroaldo el Vecchio, born in 1453, died in 1505.

It might have been thought that such a revelation, which placed an illustrious Florentine in the very forefront of the great intellectual movement which led to the discovery of the other half of the globe, would have awakened the memory of at least a few among that great number who were interested in the glory of Toscanelli, and would have caused some communication to be made relative to a fact at once so interesting and flattering to Italian scholars, and particularly to those of Florence. But nothing of the kind happened. No more after than before the publication of the *Historie* was anyone found to utter a single word confirming, either directly or indirectly, the existence of any relations whatever between Toscanelli and Alfonso, or between him and Columbus. Nevertheless one effort was made in this direction, and one only. It well deserves to be recorded, for it turned to the confusion of those who dared attempt it.

VI.—Forged Statement of Egnatio Danti (1571-1572).—Just as the *Historie* were appearing at Venice, a learned Italian, Father Egnatio Danti, published at Florence itself, Toscanelli's own city, a new edition of an Italian translation made by Egnatio's grandfather, Pier Vincenzo Dante de Rinaldi, of a small cosmographical work, which had during the Middle Ages and until the Seventeenth Century the unmerited good fortune to be translated into nearly all languages, and to be reprinted a great number of times. This work was the *Sphere* of an Englishman called Holywood, who is better known under his Italianised name of Sacro-Bosco.[39] In this edition, which is preceded by an

[39] *La sfera di messer Giovanni Sacrobosco, tradotta, emendata e distinta*

introduction and accompanied with notes by Dante de Rinaldi, two passages occur wherein Columbus is mentioned, only one of which, however, need occupy us.[40] It in substance states that the opinion which declares the torrid zone to be uninhabited must be erroneous, for Columbus discovered, in 1491, countries that were peopled within this zone, and that he had informed Toscanelli of the fact in a letter dated from Seville, which letter he, Dante de Rinaldi, had seen.[41]

It does not appear that any author of the time has remarked this extraordinary assertion, which makes Columbus return from his first voyage a year before he set out on it,

in capitoli da Piervincentio Dante de Rinaldi con molte et utili annotazioni del medesimo. Revista da frate Egnatio Danti cosmografo del gran duca di Toscana. . . . In *Firenza.* Nella stamperia de Giunti, 1571. The colophon bears 1572. Small 4°, six unnumbered leaves, and pp. 1-68.

[40] The first of these two passages will be found at p. 15. It conveys that the exact extent of the surfaces of the globe respectively occupied by land and sea cannot yet be determined, nor can it be done until after the discovery of the whole earth, at which discovery Columbus is now working, he having already found a new world, whence several times already ships have returned to Spain, laden with gold, pearls, and precious stones. This passage has been retained in the subsequent editions of the translation of Sacro-Bosco by Rinaldi.

[41] Here is a literal translation of this passage, which is to be found at pages 34 and 35: "As to the torrid zone and the two cold or glacial zones being uninhabitable, Christopher Columbus has proved that this is an error; for, having set out from Spain in 1491, and sailing towards the west, he discovered countries situated within that zone, and on his return to Spain, after a voyage of four months, he reported that the said zone was much peopled; of which fact I have had proof, having seen myself the letters which the said Christopher Columbus addressed from Seville to the very learned and expert mathematician, Master Paolo Toscanella (*sic*), a Florentine, who sent them to me by the intermediary of Messire Cornelio Randoli."

and which states that he wrote to Toscanelli in 1491, when Toscanelli had been dead since 1482. Still it did not pass altogether unnoticed, for, in the following edition of the work, published in 1574, the passage was suppressed without any explanation being given.[42] Any comment on this is unnecessary. It is evident these few lines were only printed in order to confirm the existence of the correspondence between Toscanelli and Columbus, which had just been published at Venice, and that the author of this unlucky interpolation, Father Egnatio Danti, had evidently not noticed what anachronisms he was committing.[43] Others,

[42] This edition was published at Perugia by Bernardino Rastelli. The next, which is of 1479, appeared at Florence, and like that of 1471, was published by Giunti. The interpolated passage has also disappeared there.

[43] I ought to state that I have not always looked upon this interpolation as I do to-day. Before completing my investigations on the discoveries of the Portuguese, a subject which has long occupied my attention, I had thought the phrase introduced by Egnatio Danti into the note of his grandfather might have been suggested by some vague remembrance of what the latter had told him as to his knowledge of the correspondence Toscanelli is supposed to have exchanged with Columbus, a remembrance which had been recalled by the publication of the *Historie*. I think I wrote in this sense to M. Uzielli some seven or eight years ago. At that period I entertained not the slightest suspicion as to the authenticity of the correspondence supposed to have been exchanged between Toscanelli and Columbus.

It may perhaps be asked, as I have asked myself, whether it is not possible to explain the statement attributed to Dante de Rinaldi by some confusion between the great expedition of Columbus and his voyages to the coast of Guinea, during which, he assures us, he discovered that the Torrid Zone was habitable. (See Columbus' notes to the *Imago Mundi*, vol. *Scritti*, in the *Colombiana*, No. 234). But if this be so, why has the passage been suppressed, when it only required to rectify the error in order to retain an interesting piece of information? It is the suppression that reveals the fraud.

however, had noticed the slip, and an effort was made to hush up the incriminating fact; none the less it remains, and, even to our day, there have not been wanting scholars who have found in this paragraph convincing proof of the relations of Columbus with Toscanelli.[44]

VII.—TOSCANELLI'S CORRESPONDENCE UNKNOWN TO COLUMBUS.—Among the extraordinary things a study of the formation of the legend of the relations of Columbus with Toscanelli reveals, there is one stranger than all the others: it is, that the great Genoese never appears to have known of the existence of this correspondence. In fact, he himself

If this suppression had been the work of another publisher or printer, it might be thought, not knowing how to correct the mistake, it had been decided simply to erase the sentence which contained it. But it is Egnatio Danti himself and his own printer who carried out the suppression. Would they have so acted if it were merely a question of rectifying a date in the passage in order to re-establish the truth? Most certainly not.

[44] Signor Prospero Peragallo, who has published numerous writings on Columbus, but in whom the critical faculty does not appear to be highly developed, having by chance bought a copy of the edition of 1571 of Sacro-Bosco, saw therein, quite naturally, the exact opposite of what he should have seen: proof of the relations of Columbus with Toscanelli (*Riconferma dell' autenticità delle Historie di Fernando Colombo*, Genova, 1885, in 8°; and *Cristoforo Colombo e la sua famiglia*, Lisboa, 1888, p. 104). Señor Asensio, who should have been better informed, has shared Signor Peragallo's singular error (*Cristóbal Colón, su vida*, etc., Barcelona, 1892, vol. I., p. 428, note). One regrets to see Sir C. Markham associate himself with such an opinion (*Christopher Columbus*, 1892, p. 147). Dante de Rinaldi's error was first noticed by Ximenes (*Del Vecchio e nuovo gnomone fiorentino*, 1757, p. xcviii.). Since then a number of critics have dealt with it as it deserved, among others, Signor Uzielli (*Epistolario Colombo-Toscanelliano*, 1889; and *Toscanelli*, No. 1, January 1893, p. 35); and Mr Harrisse (*Colomb et Toscanelli*, 1893, p. 7).

to whom it purports to have been addressed, to whom it would have been so useful—he who, according to Las Casas, based on it all his hopes,[45] all his calculations—he of whom his son says that it fixed his ideas and decided his vocation,[46] —he has never written a line, has never said a word, has never made the slightest allusion, which can give reason to believe that he knew there had been at Florence a scholar known as Master Paolo to whom he was under such great obligations. What, moreover, renders this silence all the more significative is that the great navigator was not one of those close spirits who work out in solitude their problems and who make a secret of their ideas. He was, on the contrary, a talker. He spoke and wrote much; and, with respect to the origin of his great design, he has shown himself to be highly communicative in carefully recording every trifle which had contributed to the formation of his plan. Thus it is that he speaks to us of Aristotle, of Seneca, of Strabo, of Pliny, of Aliaco;[47] that he enumerates the various attempts, more or less important, made at discoveries towards the west, and that he records a quantity of signs indicating the existence of unknown lands;[48] it is evident that on this long enumeration of names and facts he dwells with pleasure; still therein he just precisely omits to mention that very Master Paolo who, himself alone, had done more for him than all the others together! Surely this is very strange!

Not only has Columbus n er made the most distant

[45] "I think he based the wh me of his v letter (the one to Martins)." Las Cas *oria*. . . , p. 96.

[46] *Historie*, chap. viii

[47] *Historie*, c

[48] *Historie*

allusion to Toscanelli and the documents and information obtained from him—information on which, according to Las Casas, he placed implicit faith;[49] but it will be seen later on, when it is a question of the map, that a circumstance in connection therewith arose when his language is equivalent to a denial. We speak of the discussion which took place on the 25th September between him and Pinzón respecting the position of certain isles which they could not find, and which, nevertheless, were marked on the road-map of the expedition. Columbus, recording this incident in his log-book, speaks of the map in terms which might lead to the belief that he himself had drawn it up, but which, most assuredly, do not lend themselves to the idea that it was a map of Toscanelli[50] which was under discussion. Here, it

[49] "Columbus had such faith in the letter (the one to Martins) and to the depicted nautical map which the said Paul, physician, had sent to him, that he never doubted he should find the lands therein indicated" (Las Casas: *História*, t. I., p. 279. See also pp. 316 and 360).

[50] See on this point the second part of this work, chap. ii., paragraph 3, where the very words of Columbus are quoted and commented.

A reminiscence of Toscanelli's letter to Martins has been seen (Humboldt: *Examen critique*, t. I., p. 213) in the passage at the beginning of Columbus' Journal, where he speaks of the Great Khan, whose name means king of kings, and who desired that doctors of the Christian faith should be sent to him (*Diario*, in Navarrete, *Viages*, vol. I., p. 1, Markham's edition, London, 1893, p. 16). The identity of idea in the two passages is undeniable, but that does not prove that Columbus is not here expressing his own ideas which later on served for fabricating the letter to Martins. If it is from Toscanelli that Columbus holds the fact he puts forward in this passage, he hides the source of his information; he hides it again when, later on, in his letter of 7th July 1503, he refers a second time to that same fact. (See above, note 20). In both cases he speaks as if the information came from himself. Perhaps it may be thought there was no occasion

[illegible] Toscanelli that is [illegible] the letter which [illegible] Columbus did not know of it [illegible] unknown to him.

[illegible] authenticity of the corre-spondence attributed to Toscanelli is the alleged fact that Columbus [illegible] the only Latin text [illegible] document of that correspondence, [illegible] Let us admit for a moment that [illegible] How, then, are we to explain that Columbus has never mentioned this [illegible] Toscanelli? Will it be said that [illegible] source whence he drew [illegible] his great undertaking? If Columbus had [illegible] something from this correspondence, the [illegible] would have some value. But further on, we [illegible] that Columbus owes absolutely nothing to the [illegible] attributed to Toscanelli; that he never made [illegible] alleged to have accompanied the letter to

[illegible] Toscanelli [illegible] But neither does he name him [illegible] to form the first [illegible] by sailing to the west [illegible] Here once [illegible] Toscanelli, and appears, on the contrary, to [illegible] source of his cosmographical [illegible] is very curious, and we regret not [illegible] The name of Mandeville recurs [illegible] found in other passages wherein [illegible] Columbus' scheme according [illegible] Should one rely on the [illegible] originator of the discovery [illegible] the great Florentine astronomer, [illegible] Mandeville.

[illegible] and note 156.

Martins; and that he borrowed from that letter not one of the geographical and cosmographical ideas he subsequently enunciated. Therefore Columbus had no object in maintaining silence on the relations he is supposed to have had with Toscanelli.

CHAPTER III

REASONS FOR DOUBTING THAT THE LETTER TO MARTINS WAS WRITTEN IN 1474.

WE have just passed in review what may be called the extrinsic proofs of the non-existence of the relations attributed to Toscanelli with Martins and Columbus, and this examination has led us to observe the complete absence of any of those indications and circumstances which usually accompany the production of real facts. Nevertheless this is merely a negative result. Surprising though it may be that so important a fact as we are discussing should have left no trace behind, it is not impossible; and, in order to complete and clinch the argument drawn from this circumstance, we must demonstrate, by producing intrinsic proofs, that the fact alleged bears within itself the presumption of its own impossibility. That is what we propose doing in the following paragraphs.

I.—THE QUESTION OF THE ROUTE TO THE INDIES WAS NOT YET RAISED IN 1474.—If the letter to Martins be read with care, a singular assertion will at once be noticed. In June 1474—the date of the letter—Toscanelli tells Martins that the route to the Indies by the west is far shorter than

the one the Portuguese are seeking by coasting along Guinea. That evidently means, in the opinion of the writer, that the Portuguese are seeking to reach the Indies by doubling the African Continent; that they are wrong in adhering to this route, and that they would do better to follow the setting sun. Now, at that date, the Portuguese had not the faintest idea of sailing around Africa, and still less of going to the Indies. Let us pause for a moment on this point, which it is important to establish.

II.—BEFORE JOAO II THE PORTUGUESE ONLY SOUGHT THE INDIA OF PRESTER JOHN.—There is scarcely any statement that has been more frequently repeated than the one which attributes to Prince Henry the Navigator, who undertook his first expeditions in 1415, the preconceived design of going to the Indies by way of the east. With very rare exceptions, all who have in any manner occupied themselves with the discoveries made by the Portuguese have shared in this error, which is to be found among the most authoritative writers, and even under the learned pen of Mr Harrisse, who is generally so sure of his facts.[52]

[52] Harrisse: *The Diplomatic History of America*, 1897, p. 7.—Major: *Prince Henry*, p. 45.—Fiske: *The Discovery of America*, vol. I., p. 318.—Ravenstein: *Journal of the First Voyage of da Gama*, p. 16.—Beazley: *Henry the Navigator*, pp. 139-143. Mr Beazley credits Prince Henry with ideas that are quite modern. He attributes to him not simply the intention to circumnavigate Africa, but to discover its true shape, and to determine its place in the world. See also the *Geographical Journal* of May 1894, p. 399, where Mr Beazley speaks of Prince Henry's intention to send ships directly from Lisbon to the Malabar Coast.

Azurara, who is to-day our only authentic source of information on the enterprises of Prince Henry, has given a long list of all the reasons by which he was actuated,[53] and therein occurs no mention of sailing around Africa, of the route to the Indies, of the spice trade, which alone could have suggested the search for that route. This silence of the old Portuguese chronicler upon so important a point—a silence likewise maintained by Barros, who, like Azurara, loves to dwell on the motives which influenced Prince Henry[54]—would alone be enough to show that there is no ground for attributing this great scheme to the promoter and organiser of the Portuguese discoveries, even if the very history of these discoveries did not also bear out this view. In fact, throughout the whole active and brilliant period of the reigns of the first princes of the House of Avis — Joao I, Duarte, and Alfonso V — one cannot mention a single event or recall a solitary instance that warrants, not the deliberate statement, but the mere suggestion that, at that period, the Portuguese had turned their attention towards the East Indies. All that has been said on this subject comes from a confusion of terms, which it would have been easy to clear up if authors, instead of copying one another, had taken the trouble to refer to original sources.

The Portuguese did indeed seek, with remarkable ardour and perseverance, the road to India throughout all Prince Henry's life, and for long afterwards; but it was not the road to the East Indies: what they did

[53] Azurara: *Chronica*, chap. vii.

[54] Barros: *Da Asia*, Dec. I., Book I., chap. ii.

seek for was the India of Prester John, a very different thing, as will soon appear.

In the Middle Ages the term India had a very vague and elastic meaning. Several Indias were recognised. There were Upper India, called also the Third or Anterior India, which lay beyond the Ganges; Middle or Secondary India, comprised between the Ganges and the Indus; and First or Lesser India, which embraced Arabia, Abyssinia, and all the region about the Red Sea.[55] But these terms signified nothing definite, and the position of the various Indias strangely differed according to the periods when, and the persons by whom, they were mentioned. At the time of Prince Henry, and for long afterwards, the Portuguese understood by India chiefly the region where ruled Prester John, a famous personage whose legend was current in Europe since the Twelfth Century. He was spoken of as a potentate who extended his power over the far countries of the East, who was now placed here and then there, but always within the limits of India. After having for long made this personage journey from land to land, he was vouchsafed a definite country in Ethiopia, which, according to the notions of the time, also formed part of India.[56]

[55] D'Avezac: *Relation des Mongols*, p. 546, and the authors he quotes. Humboldt: *Examen critique*, vol. I., p. 99.

[56] *The India of Africa.*—In the Middle Ages Ethiopia was confused with India; or, rather, Ethiopia was placed in India. The Arabs had adopted this view, and it was from them the Portuguese obtained their notions of distant Africa. "I will observe," says Abulfeda, "that Sofala is also a country of India" (*Géographie*, vol. I., p. 223). In his learned introduction to this geographical work M. Reinaud shows that the Arab writers of the Middle Ages, and all those who followed them, took the term India to mean Ethiopia (*loc. cit.*, *Introduction*,

III.—PROOF FROM PRINCE HENRY'S ACTS.—At the beginning of the Fifteenth Century opinions were fairly agreed on this subject, and the Portuguese, who had heard the Moors and Arabs speak of a Christian monarch in distant Africa whose renown and power were great, never doubted but that this mysterious potentate was Prester John, whose legend had seized a firm hold on all imaginations. The fixed determination to enter into relations with so important a personage, and to contract with him an alliance which should permit of the spreading of the benefits of Christianity over the

p. ccxlvii.). The Portuguese could, moreover, find the same opinion expressed in the works of Christian authors. Towards 1330 Friar Jordanus locates Prester John in the Third India, describing him as the Emperor of the Ethiopians (*Mirabilia descripta*, in the *Collection de voyages* of the *Société de géographie*, vol. IV. (1839), p. 56, Major's edition, London, 1873, p. 41). Some years later, in 1338, the Franciscan, Jean de Marignolle, sent to the East by Pope Benedict XI, also speaks of Ethiopia as being the country of Prester John (*apud* Yule: *Cathay*, p. 348). In the middle of the Sixteenth Century Gómara thus expresses himself on this point: "Ethiopia, which is to-day the kingdom of Prester John, is called India because it has been peopled by nations having come from India" (*História generál*, Book I., chap. xviii.). He strangely adds: "This is what led Aristotle and Seneca to say that India was near to Spain" (*ibid.*). Barros supplies us with a still clearer text. He writes: "In the time of King Joao II, whenever India is mentioned, Prester John is included among its greatest potentates" (*Da Asia*, D. I., Book III., chap. iv.). About the same period, Munster, describing the kingdom of "Priest John, commonly called Prester John," informs us that there are two Indias, "l'une en Asie, l'autre en Ethiope" (*Cosmographie*, edition of 1552, p. 1426). Finally, Basnage remarks that the old historians of the Church "donnent souvent le nom d'Indes à l'Ethiopie" (*Hist. des Juifs*, vol. VII., p. 108).

This geographical error was not dissipated until the expeditions of King Joao II. On the different meanings of the word India in the Middle Ages, see Yule's *Marco Polo*, vol. II., notes 7, p. 419, and 1, p. 425. See also Major's notes to his edition of *Jordanus*.

barbarous regions of Africa, and should assure to Portugal the political advantages which were bound to accrue from that alliance, became one of the chief incentives to Prince Henry's undertakings. The Portuguese had but a vague notion of the exact position of the empire of Prester John; but the uncertain and confused information they had obtained on the subject led them to believe that on one side this empire was bounded by the Atlantic, and that it might be possible to discover on the Western Coast of Africa some country that was dependent upon it, through which it would be possible to reach the mysterious potentate with whom they were desirous to establish relations.[57]

It is in this singular geographical conception that we

[57] Whether it came from the Arabs or not, the impression that the authority of Prester John extended far to the westward was very widely spread in the Fifteenth Century. In the map of the world of the Borgia Museum, dating from the beginning or middle of the Fifteenth Century, the kingdom of Prester John is placed in a fork of the Nile, and extends to the Straits of the Columns of Hercules and the Gold River. The chaplains of Béthancourt, speaking of the expedition he meditated to Cape Bojador, say that there intelligence may be obtained of Prester John (*Hist. de la Prem. découverte*, etc., chap. liii., Major's edition, London, 1872, p. 94). See what Barros says on this subject (*Da Asia*, D. I., Book III., chap. iv.), and Pacheco (*Esmeraldo*, chap. i.)

If the Portuguese erred in extending the domination of Prester John to the Atlantic, it nevertheless appears certain that the Ethiopians or Abyssinians have, in ancient times, swarmed westward, as well as towards the south and north, for modern explorers have found their type—more or less altered by crossing—as far away as Senegambia, in Upper Gambia, and even close to the Ocean (see hereon, R. Verneau: *Les Migrations des Ethiopiens*, Paris, Masson, 1899, pp. 9 and 20). It is therefore not surprising that the dwellers on the coast, with whom the Portuguese had relations, should have heard speak of the sovereign of East Africa, in whom the Portuguese thought they recognised Prester John.

must seek for the key of many of the expeditions ordered by Prince Henry, and there is every reason to believe that this prince died before he was aware of his mistake. None the less, it must be remembered that it was to this error that the Portuguese owe the long succession of discoveries which carried them to the Gulf of Guinea and far beyond it.

The first instruction the prince was wont to give to his navigators was always to inquire diligently for Prester John and of the best way to reach him.[58] We know, moreover, that they carried out their orders, and that the information gained was encouraging, since, more than once, the Portuguese thought they were on the point of attaining the goal for which they were in search. For instance, in 1455, an Indian interpreter was sent out with Gomes, who was going to explore the Gambia, in case, as he said, "we should reach the Indies."[59]

IV.—PROOF BY THE BULL OF 1454.—Without pausing to note down all the circumstances which show that Prince Henry never had the intention of going to the East Indies by doubling Africa, and that the chief object which occupied his attention was to enter into communication with Prester John, we arrive at a document which clearly states what the Portuguese had in view: the Bull of Pope Nicholas V, dated the 8th January 1454. By this famous Bull, the fountain-head of all the territorial concessions made by the Holy See to the Portuguese, Pope Nicholas sanctions all conquests made or to be made by the Portuguese in the

[58] Azurara: *Chronica*, chap. xvi., p. 94. Beazley's translation, London, 1896, vol. I., p. 55; see also p. 28.

[59] Gomes: *De Prima inventione Guinea*, p. 29.

hitherto unknown portions of the world they have been exploring for twenty-five years, and reserves to their activity the entire region from capes Nun and Bojador to Guinea and "the distant shores of the south." As in all documents of this nature, the Sovereign Pontiff states the motive for his act, and explains that the gift he makes to Portugal is justified by Prince Henry's endeavours to open a path to regions hitherto unknown, as well towards the south as towards the west, and to get into communication with "the people of India who are reputed to honour Christ," in the hope of "bringing them to the aid of the Christians against the Saracens and other enemies."[60]

Here, drawn up in plain terms and without the possibility of equivocation, is the end sought by the Portuguese. It was not to what we now call the Indies they were feeling their way; it was the India of Africa, the India of Prester John, where dwelt a Christian people, whose help it was hoped to obtain against the pagan populations of the Continent—that is to say, it was the Ethiopia of the ancients, the Abyssinia of to-day. Of the Indies properly so-called, of sailing around Africa, there is not a word in this Bull, which is, as we have already said, the fundamental deed of the concessions from the Holy See to Portugal—the deed to which the Popes, successors to Nicholas V refer, in order to confirm its conditions.[61]

[60] This well-known Bull is to be found in all the diplomatic collections. Dumont, vol. III., part I., p. 200.—Leibnitz: *Codex*, vol. I., No. 165.—The *Bullarum collectio* of Lisbon, 1707, pp. 18-20.—*Alguns documentos*, Lisbon, 1892, pp. 14-16.

[61] *True meaning of the concessions granted by the Bull.*—In his *Diplomatic History of America*, Mr Harrisse has read the Bull of 1454 quite differently to us. According to him the Pope concedes to Alfonso V

On the death of Prince Henry the expeditions of the Portuguese towards the south for some time underwent a check. King Alfonso, notwithstanding his surname of

all the regions discovered or to be discovered south of capes Bojador and Nun towards Guinea, as also all those that are "*on the south coast and on the east side*" (*loc. cit.*, p. 6). On the next page Mr Harrisse says that, as this Bull mentions the south and east "of Africa," we must conclude that already, in 1454, that is to say, thirty years before the expedition of Bartholomew Díaz, the Portuguese entertained the project of doubling the African Continent to the south, and of attaining by this route what they called the regions of India (*loc. cit.*, p. 7).

In support of this view the eminent critic cites a passage of the Bull, beginning with the words: *per huiusmodi Oceanum*, etc. (p. 158). But this passage does not occur in the granting portion of the document: it is in that part which recites the efforts made by the prince to make known the ocean as well towards the south as towards the east. Here is given a translation of the entire passage:—

"The Infante, knowing for a long while that never, or at least within the memory of man, had this ocean been explored by navigators, either towards the south or east, and was consequently unknown to us Westerners, who knew nothing certain respecting these regions and the people who inhabit them, thought he should be doing a work pleasing to God in devoting his efforts to making navigable this ocean as far as the country of the Indians, who are said to worship the name of Christ (*usque ad Indos qui Christi nomen colere dicuntur*), in order to get them to lend aid to the Christians against the Saracens."

It will be seen that there is no question here of the southern or eastern shores of Africa. What the Bull means by *Oceanum mare versus meridionales et orientales plagas* is that portion of the Atlantic which washes the coasts of what was then called Guinea, and which, south of Cape Verde, trends, and afterwards directly runs, eastward. It must not be forgotten that in 1454, the date of the Bull, the Portuguese had not yet penetrated this part of the Atlantic, and that the Gulf of Guinea, which they could only reach by bearing east, was to them really an Oriental sea. Mr Harrisse completes his quotation with the following passage, which appears to justify his point of view: *Declaratio, tum soptam, tum reliquam Africam, a promontoriis Baradoc et Nam ad Guineam vel etiam ultra ad Antarcticum, omniaque adjacentia Saracenorum*

African, had his views turned elsewhere than towards discoveries; and the traders to whom he left the duty of continuing the exploration of the African coast carried it out with but little energy. They did go down, however, as far as the Gulf of Guinea, but occupied themselves more with trade than discovery, and they do not seem to have given a single thought to Prester John and his Indian Empire.

V.—PROOF BY THE TREATY OF 1479.—In the last years

Regna Lusitaniæ corona esse addicta (Mainard, vol. III., part III., p. 70). But this passage does not form any part whatsoever of the Bull; it is merely a portion of the summary which the editor of the Mainard's *Bullarium*, consulted by Mr Harrisse, placed at the head of the document to indicate its contents. It is not found in any other reproductions of that Bull. The part of this document mentioning the donation to the Portuguese shows, moreover, that it is only a question of Western Africa.

The Pope, in fact, after completing the enumeration of Prince Henry's discoveries in "the seas and maritime regions situated towards the south and the Antarctic Pole," as far as "the province of Guinea" and up to "the mouth of a great stream, which is thought to be the Nile" (the Senegal), declares that, on account of these deeds, all King Alfonso has already occupied or acquired, or shall in the future occupy and acquire, belongs to the said king, his successors, and the Infante. Further on the Pope particularises that this donation includes the "conquests beginning at the capes" Bojador and Nun, up to and including all "Guinea" (*conquestam quam a capitibus de Bojador et de Nam usque per totam Guineam*), and extending thence beyond towards the distant shores of the south (*et ultra versus illam meridionalem plagam extendi*). There is undoubtedly here mention of the distant shores of the south and of the regions of the Antarctic Pole as direction or as the limits to the field of Portuguese exploration; but what the Bull says of Guinea and of the Nile shows that we cannot attribute any definite geographical meaning to these expressions, which betray the uncertainty then existing respecting the shape and size of Southern Africa; above all, one cannot certainly see therein an allusion to the route to the Indies.

of the reign of Alfonso V, in 1479 and 1480, Portugal and Castile, after a disastrous war, concluded the famous Treaty of Alcaçovas, which defined, for the first time, the field reserved for the future discoveries of the two powers, and which consequently shows what were then their aspirations in this direction. By this treaty, which settled the question of the respective rights of the two crowns over the territories of the African Continent and the Atlantic islands, the objects of their rivals claims, Castile abandoned to the Portuguese all the vast African region known under the vague term of Guinea, as well as all the isles discovered or to be discovered in that quarter, excepting only the Canary group, which Portugal relinquished.[62] From the point of view now occupying us, this is all that can be found in this deed, wherein not once is mentioned Southern Africa or the Indies. Of the vast Atlantic region extending to the west beyond Cape de Verde Islands, the Canaries, and the Azores, not a word is said in this first partition between the two powers about new lands already known, or whose existence was even suspected.[63]

[62] The treaty of 1479, drawn up the 4th September at Alcaçovas, signed by Portugal at Evora on the 8th September, and definitely by Castile on the 6th March at Toledo, has never been printed in its entirety. From documents and information which Senhor Basto, the obliging keeper of the Archives of la Torre do Tombo, has been good enough to communicate to me, this treaty comprises two deeds: one dealing with the dynastic question; the other, with the general conditions for peace. The clause in this second deed, stipulating the cession of Guinea to the Portuguese and the Canaries to Castile, is found in *Alguns documentos*, Lisbon, 1892, pp. 45-46. Señor F. Duro has most kindly sent me a text of the same clause from a Spanish source, which he obtained from the Vargas Ponce collection.

[63] *The Treaty of* 1479.—The Portuguese historians and Spanish

Here we have, it would seem, decisive proof that at the date of the signing of this treaty, 1479, the Portuguese were meditating neither circumnavigating Africa nor seek-

authors who give an account of this treaty, above all Ruy de Pina, who is the first to mention it, are unanimous in saying that by this transaction was reserved to Portugal the right to continue its discoveries and conquests from capes Nun and Bojador as far as and including the countries of the Indians (*Dos cabos de Noun e do Bojador atée os yndios.*—Pina: *Chronica d'Affonso V*, chap. cvi., in *Coll. de libros ineditos*, etc., vol. I., p. 591). If this phrase, or any equivalent expression were found in the treaty, there would be grounds for believing that by this deed the Portuguese secured to themselves the right to go to the East Indies, and that, consequently, they were meditating doing so at least as early as that period. But neither the word *including*, which appears to have been interpolated by Barros, nor the words underlined, which come from Pina, and which every subsequent writer has copied, are to be found in the treaty. Yet no one could have known better than Ruy de Pina the real conditions of the treaty. However, this chronicler wrote under King Manoel, when the Portuguese had already reached the Great Indies, and we can well understand he unconsciously slipped into his summary of the treaty a condition which was not textually inscribed therein, but which he could reasonably consider to be implicitly meant, for in less than eight years from the signature of the treaty the Portuguese had doubled the southernmost point of the African Continent, and had turned the bows of their caravels towards the East Indies.

But at the time the treaty was discussed and concluded there was no such question raised. For long the Portuguese had entertained the hope of finding a way of communication with the empire of Prester John, and the further south they went the firmer grew their hope. For them, in 1479 as in 1474, and in 1471, when they crossed the line for the first time, all the undefined region called *Guinea*, whose limits stretched southward to a point unknown, was the portion of Africa which must necessarily touch that Indian Empire they had sought, and to which they could now think they were on the point of attaining. It was just precisely that part of the Continent which Castile abandoned, the part between capes Nun and Bojador, the starting-point of Portuguese discoveries, and the unknown region of Guinea—or bordering on Guinea—that was supposed to be occupied by the Indians who, so

ing a route to the East Indies, either by the east or by the west. If, four or five years beforehand, as results from the letter to Martins, King Alfonso already sought to reach the East Indies, and if he were so determined to find a way leading thither that he had been contemplating taking the one, then absolutely unknown, to the west, it is evident this scheme must have been very dear to him, and he would scarcely have failed to include in the treaty some reservation thereon, especially if he had the intention of crossing the Atlantic, where everyone then thought undiscovered lands and islands existed. The Catholic kings would have made no difficulty about signing a clause to this effect; for at the time they made no claim to the new regions, and were only anxious that the new dynasty they had founded in Castile should be acknowledged by the one power capable of raising opposition to it.

On the accession of King Joao II, in 1481, the plans of Prince Henry were revived, and the search for Prester John and a road to his dominions was renewed. It does not fall within our scope to relate here the history of those memorable expeditions which, within a few years, revealed to the Portuguese that the Empire they had long sought was on the east coast of Africa; that it could only be reached by

it was asserted, knew Christ. When, therefore, the Castilians engrossed on the treaty that what belonged or might belong to the Portuguese was all they had discovered and might discover within the limits of Guinea, they were in fact withdrawing from the whole of Africa, and, unconsciously, opening to their rivals the road to India. In the light of these considerations, we may understand how Pina came to say that the treaty of 1479 recognised the right of the Portuguese to the whole region extending to the country of the Indians: *até os yndïos*, three words which, as we have seen, are not in the treaty, but which well indicate its scope.

sailing round the Continent; that they had no longer any interest in going there; and that, henceforth, all their efforts must be turned towards the discovery of the East Indies. All these facts are well known, and would add nothing to the preceding argument—namely, that the idea of going to the Indies by the sea-route never took shape with the Portuguese until their discoveries had brought them to the coasts of Southern Africa.

VI.—ERROR RESPECTING THE SPICE TRADE.—Furthermore, why should the Portuguese have sought the route to India in 1474? To engage in the spice trade? So it is clearly supposed. But that trade did not then exist in Portugal, or was of no importance. We do not find a word in Azurara and the chroniclers who have related the early enterprises of the Portuguese along the African coast indicating that they were interested in the spice trade. In fact, before the discovery of the Bight of Benin, where the Portuguese found malaguetta, or Guinea pepper, which subsequently became an important article of barter with the negroes, they appear to have known no other spice but Indian pepper. That was at least the only spice they consumed in any quantity. To imagine that in 1474 they attached such importance to the spice trade, as to be ready to face the dreaded passage of the Atlantic in order to reach the spice-producing countries, is to make a supposition contrary to all likelihood, and flatly at variance with the best established facts. In 1474 the Portuguese thought no more about the spice trade than of the route to the Indies, whether by the east or by the west. They had no motive for so doing; and the real incentives only

originated with their discovery of Southern Africa, and the wide development of commercial interests which resulted from that discovery. It was only under King Joao II that the evolution took place. It was then alone that the Portuguese began to take an interest in the spice trade, and understood how important it was for them to find a route which should lead to the true Indies, now at last distinguished from the Indies of Prester John. How then could Toscanelli, at the period he is alleged to have written, have attributed to the Portuguese the intention of seeking at that time the route to the Indies?[64] This assertion alone suffices to betray the hand of a man who ill knew the story of Portuguese discoveries, and who attributed to them in 1474 a design they could not then have had, and which in fact they only formed much later on.

VII. — ALFONSO'S POLITICAL COMBINATIONS. — This date of 1474 recalls another observation. It carries us back to a period when Alfonso was thinking of anything rather than discoveries and maritime explorations. In

[64] Ximenes, who was somewhat puzzled by the assertion in the letter to Martins respecting the search for the route to the Indies in 1474, supposed that, even at that date, the Portuguese were interested in the spice trade (*Del Vecchio e del Nuovo gnomone fiorentino*, Florence, 1757, note 4, D., to his reproduction of the letter). Barros e Vasconcellos, in his letter to the *Journal des Savants*, 1758, was the first to point out this error. "It must be remarked," he says, "it was only after the Portuguese had penetrated beyond Guinea that the kings of Portugal proposed to themselves the discovery of a way to the Indies (p. 9 of the reprint). . . ." "This monarch (Joao II) is the first who made known his views on trade with the spice-producing Indies" (*ibid.*, p. 10). This passage is quoted because of its date; the error it shows is patent.

1469 he had farmed out the commerce and also the navigation of Guinea, and only indirectly did he occupy himself with those distant expeditions which had enthralled his uncle Prince Henry, and which had, at one time, greatly interested himself. He was now occupied by other thoughts: he aimed at uniting the two crowns of Portugal and Castile upon his own head by marrying his niece, the Princess Joanna, daughter and heiress of King Henry IV of Castile. This political scheme, which led, on King Henry's death in December 1474, to a long and cruel war between the two countries, ceaselessly occupied all the attention and resources of King Alfonso until the moment events obliged him to renounce it and sign with the Catholic kings the treaty of 1479. Neither in 1474, nor in the immediately preceding and following years, was the King of Portugal in a position to occupy himself with the discovery of a new sea route, or to devote to that discovery a portion of his resources. There is not a word, moreover, as we have already said, bearing on this subject to be found in contemporary documents or among the writings of the Portuguese authors of that time.

VIII.—CURIOUS GEOGRAPHICAL ERROR.—But, admitting that King Alfonso had conceived the vast design of crossing the Atlantic in order to reach the land of spices, and that in furtherance of his scheme he had consulted one of the most learned scholars of Italy, can it be conceived that this scholar should reply to such a demand by a letter like the one sent to Fernam Martins? For, if we closely examine this famous letter, we shall find therein nothing that denotes it comes from one of the

highest scientific authorities of his time. Apart from some information contained in the post-scriptum, to which we shall revert, Toscanelli does not vouchsafe the king any serious advice on the question submitted to his judgement; he simply contents himself with a glowing description of the riches of the countries in the Far East, and enters into details as childish as exaggerated, which are surprising coming from the pen of a scholar accustomed tothe methods of the exact sciences; he solely borrows from Marco Polo, whose account was already more than a century and a half old, when he might have drawn from the reports of Odoric de Pordenone, who had dwelt several years in China, and who was back in Italy in 1330; of Bartolommeo Fiorentino, who, in 1424, returned from India, where he had travelled for twenty-four years; of Nicolò di Conti, who spent forty years in the East, and who had returned to Florence in 1439; and of many others all well known in Florence, which was at that period the intellectual centre of Italy, and all rich with information on the distant East —information more recent and quite as authentic as that supplied by Marco Polo. Is this what a king like Alfonso ought or could have expected from a man like Toscanelli?

Nor is this all. In sending to the King of Portugal geographical information borrowed from Marco Polo, a traveller of the Thirteenth Century, the author of the letter to Martins leads him into error. Thus, in order to encourage Alfonso V in the undertaking he was contemplating, he describes the countries and cities that are sure to be found at the end of the journey: the great province of *Cathay*, the usual residence of the *Great Khan*, supreme emperor of tributary kings; that of *Mangi*, which lies

adjacent ; the wealthy city of *Zayton*, and the beautiful city of *Quinsay*. Now, all these denominations belong to the period of the Mongol power in China, founded by Chinghis Khan in 1206, and ended in 1368 by the advent of the Ming dynasty. It was during this period that Plan Carpin, Ruisbrock, and Marco Polo visited China, and from them Europe learned the names of Cathay and the other places mentioned in the letter to Martins. But, in 1474, the date of this letter, more than a century had elapsed since China had been governed by a Great Khan, since the country had been called Cathay, since the province of Mangi had ceased to exist, and that the cities of Cambelec, Zayton, and Quinsay were known by other names. All these denominations had disappeared, and had even left no trace behind ;[65] so that, had the impossible journey advised by Toscanelli taken place, the Portuguese navigators would have found on the extreme Asiatic coast not a spot bearing the designations which the renowned astronomer had so complacently enumerated. The geography of the author of the letter of 1474 was behindhand, therefore, by more

[65] *Mongol Denominations.*—Not only, says Yule, were these old denominations forgotten ; it had also been forgotten that these cities, then known by new names, had ever had any others. We give the entire passage in which Yule describes the geographical transformation that followed the fall of the Mongol power :—"A dark mist has descended upon the farther East, covering *Mangi* and *Cathay*, with those cities of which the old travellers told such wonders, *Cambalec* and *Cansay*, and *Zayton*, and *Chinkalan*. And when the veil rises before the Portuguese and Spanish explorers, a century and a half later, those names are heard of no more. In their stead we have *China*, and *Peking*, *Hangcheu*, *Chincheu*, and *Canton*. Not only are the old names forgotten, but the fact that those places had been known before is utterly forgotten also" (*Cathay and the Way Thither*, London, 1866, 2 vols. in 8°, vol. I., pp. cxxxiv. and cxxxv.).

than a whole century. It is idle to argue that these changes long remained unknown in Europe, for, let it be remembered, the author of the letter makes Toscanelli say that he discoursed with an ambassador from the Great Khan, and that from him he obtained much information concerning his country. We must, therefore, suppose this ambassador left Toscanelli under the impression that the Mongol geographical names were still current in China as they were in the days of Marco Polo, and that the sovereign of that country still bore the Mongol title of Great Khan. This passage of the letter would alone suffice to substantiate the forgery.

IX.—ORIGIN OF THE HYPOTHESIS AS TO THE POSSIBILITY OF A PASSAGE TO INDIA BY THE WEST.—Let us now examine this document from the point of view of the cosmographical ideas it expresses. The letter to Martins is based on the hypothesis that the space to be traversed to reach the Indies by the west is neither great nor obstructed by any obstacle. These two ideas, though false, might, nevertheless, at the period have been considered important had they been new. But they were not the special property of Toscanelli, and they could convey no instruction to learned princes, as were the sons and grandsons of Joao I, whose views were specially turned towards oceanic discoveries, and of whom one was so occupied with questions of cosmography and navigation that it has been possible to compare his palace, wherein he prepared his expeditions, to a naval academy. The notion of the possibility, and even the facility, of a passage to the Indies by leaving the coasts of Iberia or Africa was, so to speak, current in

antiquity. Aristotle,[66] Eratosthenes,[67] Posidonius,[68] Seneca,[69] and others had expressed it, and it is no exaggeration to put forward the statement that it never ceased to be present to the minds of Greek and Latin thinkers. The educated Portuguese knew as well as Toscanelli of this opinion, which under various forms was reproduced by the writers of the

[66] *Aristotle's Opinion.*—Aristotle speaks only of the opinion of those who believed that the country situated near the Columns of Hercules stretches itself to meet those which are towards India, and says this supposition is not incredible, for it relies on the fact that elephants are found at the two extremities of this zone (*De Cælo*, II., 14, 15). Aristotle does not reject this view, but he is not in favour of it, for elsewhere he says that the whole habitable world can be crossed longitudinally, unless the immensity of the sea does not somewhere prevent it (*Meteorologicorum*, II., v. 13). Further on he says : "The parts which are outside India and the Columns of Hercules do not appear able, on account of the sea, to join one another in such manner that the whole habitable world should be absolutely continuous" (*ibid.*, II., v. 15). Nevertheless, it results from these citations that Aristotle did not think the maritime space separating the two ends of the habitable world was considerable ; but he does not say, as Ferdinand Columbus makes him, that the space can be traversed in a few days (*Historie*, chap. vii., fol. 14).

[67] According to Eratosthenes, the habitable zone of the earth formed a circle ; "so that, if the extent of the Atlantic Ocean were not an obstacle, we might easily pass by sea from Iberia to India, still keeping in the same parallel" (*Eratosthenes* in *Strabo*, Book I., chap. iv., sect. 6 ; *Hamilton's translation*, page 101, London, 1854.—Bohn's Classical Library).

[68] "Starting from the west, one might, aided by a continual east wind, reach India in so many thousand stadia" (*Posidonius* in *Strabo*, Book II., chap. iii., sect. 6, p. 154 ; *Hamilton's translation*).

[69] *De quæstionibus naturalibus*, Introduction.—Strabo is also placed among those who thought that the passage to the Indies by the west was practicable ; but the passage from this author that is cited in this connection refers to sailing round the surface of the habitable land by hugging its coasts, and not to circumnavigating the globe (see Book I., chap. i., sect. 8, pp. 7-8 ; *Hamilton's translation*).

Middle Ages, and they had no call to be instructed on this subject. The letter to Martins, therefore, added nothing to what they already knew respecting the theories put forward by the ancients as to the possibility of passing from Europe into Asia by crossing the Atlantic. Is it the same with regard to the numerical ideas, that is to say, the information dealing with distances, to be found in this letter? We shall see that these, like the others, were also borrowed from antiquity.

From the point of view of length, that is to say, from east to west, the ancients generally considered that the habitable world occupied an extent corresponding to a third of its total circumference. This was the classical, the traditional opinion. Eratosthenes was among the first to express it; Strabo adopted it, and for a very long while it prevailed.[1] But as Eratosthenes gave 252,000 stadia to the circumference of the earth, and reckoned there were 70,800 stadia from the extreme west to the farthest east, following the parallel of greatest length through the habitable earth which, according to the ancients, was the parallel of Athens, and in which Eratosthenes reckoned there were in all 77,760 stadia,[2] his Atlantic on the great circle or equator measured 181,440 stadia,[3] and on the 38th parallel, which

[1] Strabo, explaining Eratosthenes' measurements, says that, according to him, the Atlantic represents about two-thirds of the circumference of the globe along the parallel of Athens. The remaining third was formed by the continental space extending from Iberia to India eastwards (Book I., chap. iv., sect. 6, pp. 101-102; *Hamilton's translation*).

[2] The information Strabo records as to the length Eratosthenes gave to the inhabited world does not enable us to fix exactly what was that length. It is certain, nevertheless, that Eratosthenes reckoned

approximately is that of Athens, about 129,000 stadia. Strabo increased this distance by reducing the length of the habitable world to 70,000 stadia, which therefore left an unknown ocean space of 182,000 stadia[72] along the great circle. Posidonius considerably reduced these measurements by giving the globe a circumference of 180,000 stadia—a measurement which Ptolemy adopted, and which ended by being generally accepted. But, though he reduced the circumference of the globe, Posidonius did not diminish the extent of the habitable world; on the contrary, for he found that on the mean parallel, along which it was customary to measure it, the world had a length of 70,000 stadia, "half of the entire circle," says Strabo.[73] Here, then, we have an exact measure: from the western shores of the Old World to its eastern shores there are, about the 36th or 38th parallel,[74] 70,000 stadia measured anyway, say 12,950,000 metres, at the rate of 185 metres per stadium. Seneca,

70,800 stadia from India to the Columns of Hercules, but to these 70,800 stadia it would appear he added several other distances, which might together make 10,000 stadia; so that for him the inhabited earth certainly measured 70,800 stadia, and, in all likelihood, still more (*Strabo*, Book I., chap. iv., sect. 5, pp. 100-101; *Hamilton's translation*).

[72] *Strabo*, Book II., chap. v., sect. 6, pp. 170-171; *Hamilton's translation.*

[73] *Strabo*, Book II., chap. iii., sect. 6, p. 154; *Hamilton's translation.*

[74] The ancients measured the inhabited earth along the parallel of Rhodes or of Athens, and, as on that latitude the earth's circumference is far less than on the equator, the 70,000 stadia of Posidonius fully made up the half of the circle, as Strabo says. Whatever may be the parallel of which he speaks, Posidonius says formally that a vessel setting out from the extreme west, and making exactly 70,000 stadia, would reach the Indies (*Strabo*, Book II., chap. iii., p. 154, sect. 6; *Hamilton's translation*).

Thus, fourteen centuries before Toscanelli, a cosmographer, whom Ptolemy has made known by discussing his views at length, had given to the ancient world the same extension towards the east as the author of the letter to Martins, and had reduced, exactly as he has done, the space which divides the two extremities of this Continent. We cannot see here a mere coincidence. The writer of this famous letter has evidently reproduced the system of Marinus of Tyre, just as he has reproduced the notions current in antiquity on the proximity of the regions of Eastern Asia with those of Western Europe, and the opinions held during the Middle Ages concerning the islands of the Atlantic. We cannot, in effect, admit that he has himself deduced the numerical information he puts forward from new data; for, besides the fact that such data was wanting, a similar operation was one of considerable difficulty, and if Toscanelli had applied himself to it he would, in one way or another, have let it be seen that his letter had a scientific basis which was of his own construction, whereas he speaks and reasons throughout as though the data he interprets were known or accepted. It must therefore be admitted that the letter to Martins, in its scientific as in its geographical aspect, contains nothing new, and that the most important piece of information to be found in it, the only one that was then of any value, namely, that the width of the Atlantic was about 130 degrees, came from antiquity, as did also the notion of the possibility of traversing this space.

This idea of the ancients, that the two extremities of the world were near enough to permit of crossing from one to the other, had been so frequently reproduced that it was not

[illegible] bibliographers are agreed in [illegible] this date is either an error or a falsification. This pretended first edition of Ptolemy is probably the third or fourth.

Vincent) and Sera, the capital of China, is erroneous, and that Ptolemy shows it to be so.[79] Therefore, if it was Toscanelli who wrote the letter to Martins, we must choose between two alternatives: either he failed to understand the corrections of Ptolemy, or he has built up a scheme for crossing the ocean, and recommends its adoption to King Alfonso, on geographical data the inaccuracy of which has been demonstrated to him; two hypotheses equally unacceptable. One can, however, conceive that an individual who had not the knowledge of Toscanelli, but who had some interest in attributing to a scholar like him the views expressed in the letter to Martins, may have borrowed those which belonged to Marinus of Tyre, either from one of the editions of Ptolemy later than 1474, without having realized their small scientific value and the imprudence there was in attributing them to Toscanelli, or from Columbus himself, who knew of them through one of the editions of Ptolemy printed after 1475.

Thus the more closely this famous letter is examined the more difficult does it appear that it could have been written in Florence in 1474 by a scholar in the position of Toscanelli. It will be seen shortly that these are not the only reasons which put in question the authenticity of this document.[80]

[79] Ptolemy: *Geog.*, Book I., chaps. xi. to xv.

[80] *The Portuguese and the Italian Cartographers.*—Lampillas, who was the first to be surprised at certain assertions in the letter to Martins, has remarked that the Portuguese could not have thought, in 1474, of asking the advice of foreign cosmographers as to the navigation of the Atlantic, which they knew better than any one, considering that for fifty years they alone had sailed upon it, and had there made discoveries. (Lampillas: *Saggio*, etc., t. II., part I., p. 143). This objection is only a specious one. The Portuguese knew the Atlantic better than other

sailors, but only in certain regions. To the west they had never sailed beyond the meridian of the Azores, while that portion they would have to cross in order to reach the Indies was absolutely unknown to them. The Italians, on the contrary, though they might be unacquainted with the intervening maritime region, knew at least the terminal region, the goal of the journey, Cathay and the land of spices. On these countries they were well informed by their great travellers, by Marco Polo, Nicolò di Conti, and others, as well as by their merchants, who had long traded in the commodities of the East. Far from ignoring the cosmographical and nautical science of the Italians, the Portuguese were constantly having recourse to it, for there is no doubt that it was by the help of Italian maps that they made most of their discoveries. Fifteen years before the letter to Martins they had commissioned Fra Mauro to furnish them with a map, which has become celebrated. If, therefore, Alfonso really had the idea of going to the Indies by the west, it would not have been surprising had he applied to an Italian cartographer for some counsel and advice concerning his expedition.

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CHAPTER IV

COLUMBUS' COSMOGRAPHICAL IDEAS ARE IDENTICAL WITH THOSE EXPRESSED IN THE LETTER ATTRIBUTED TO TOSCANELLI.

THERE remains a last remark to make as to the origin of the cosmographical ideas developed in the letter to Martins, and it is not among the least strange: Columbus gives them all as being his very own. These ideas, we have just seen, resolve themselves into the following propositions:—

The earth is smaller than is generally supposed. The Asiatic Continent stretches far more towards the east than Ptolemy imagined.[81] The maritime space between the two extremities of the inhabited world forms about one-third of the circumference of the globe, and does not exceed 130 degrees. At the farther end of this space one first encounters the island of Cipangu, then the great Chinese provinces of Cathay and Mangi, the rich cities of Zayton,

[81] These two ideas are not *expressed* in the letter to Martins, but they result from what is there stated. One cannot reduce to 26 spaces, or 130 degrees, the space separating the two extremities of the ancient world, without giving Asia a considerable extension towards the east, and, if the third of the circumference of the globe only measures 26 spaces of 250 miles each, the earth is smaller than Ptolemy made it. See the Second Part: *The Map*, chap. i.

Quinsay, etc. Now, these are the very views of Columbus himself, just as they are to be found in his various writings, as we shall proceed to show.

I.—COLUMBUS' MEASUREMENT OF THE EARTH: ALFRAGAN.—During his residence in Portugal, Columbus appears to have sailed several times to the seas of Guinea, about which voyages very little is known, but which appear to have had a certain importance for him. It was during these voyages, which may be placed towards the year 1482 or 1483,[82] that he pretended to have made certain astronomical observations which hold a great place in his cosmographical notions.

During the Middle Ages, and even until the discovery of America, we may say that there existed but one opinion on the measurement of the circumference of the globe and of the size of the inhabited world: it was the one which the then undisputed authority of Ptolemy had made prevail, namely, that the 360 degrees of the great circle, each degree consisting of 500 stadia, gave a circumference at the Equator of 180,000 stadia, or 22,500 miles, at the rate of 62½ miles to the degree, which was then

[82] Columbus does not give the date of these voyages; but as he speaks of the Fort of San Jorge da Mina, which was the goal of one of them, he cannot have gone earlier than the end of 1482, since it was only in that year that Diogo d'Azambuja, who built this fortress, sent back to Portugal the men who had worked on it. Markham supposes Columbus accompanied this navigator, who sailed at the end of 1481 (*Columbus*, p. 33). Fiske thinks he took part in the expedition under Santarem and Escobar in 1471 (*The Discovery of America*, vol. I., p. 352). But at that period Columbus had not yet left his home. The voyages of Columbus to the coast of Guinea must have taken place from 1482 to 1483.

the usual method of computation.[83] If we admit that the Olympic stadium equalled in round figures 185 metres,[84] this measurement will give to the circumference of the earth 33,300,000 metres instead of 40,007,520;[85] that is to say, Ptolemy diminished the circumference of the globe by nearly 7,000,000 of metres.[86]

If we believe Columbus, the observations he had made in the course of his voyages to Guinea led him to this conclusion: that the equatorial degree is equal to $56\frac{2}{3}$ miles, as the Arab astronomer Alfragan has demonstrated, says Columbus,[87]

[83] Uzielli: *Toscanelli*, No. I., p. 10.—Reckoning the degree at $62\frac{1}{2}$ miles was taken from Ptolemy, whom all the world then followed. This cosmographer gave to each degree 500 stadia, of which 8 made an Italian mile; thus, $62\frac{1}{2}$ miles, or $15\frac{5}{8}$ leagues. But in practice navigators calculated 4 miles to the league, making thus 60 miles to the degree.

[84] Demonstration made by Th. Henri Martin in his learned *Mémoire sur la circonférence du globe*, which is generally accepted. We are not unaware that recent excavations have led to the supposition that the stadium to which ancient writers refer measures more; but it would appear that this supposition is ill-founded.

[85] M. Faye's conclusion, 1894.

[86] Vivien de Saint-Martin has put forward the opinion that the stadium Ptolemy employed was a conventional one, different from the others (*Hist. de la géog.*, pp. 101-103). But if there is one fact well established to-day, it is that all the Greek computations of the circumference of the globe are based on a unique stadium (see the above-cited *Mémoire* of M. Th. Henri Martin, pp. 67-68).

[87] *Alfragan.*—Cardinal d'Ailly, whom Columbus copies, calls by the name of Alfragan an Arab astronomer of the Ninth Century, whose real name was Ahmed Ben Kebir (Sédillot: *Histoire des Arabes*, vol. II., p. 269), but to whom was given, from the place of his birth, the surname of Al Fergani, whence comes Alfragan or Alfergan. Alfragan does, in effect, give a length of $56\frac{2}{3}$ miles to the degree, though not after his own observations, but from the measurement of a terrestrial meridian carried out by order of the Caliph Almamoun, who reigned from 813 to 833. Almamoun, who had caused to be translated the *Almagest* and *Geography* of Ptolemy, wished to find out whether Ptolemy's measurements of the

and, as he furthermore adds, the investigations made by

earth were really correct, and with this object, about the year 827, he ordered two simultaneous experiments, which gave different results. According to one, the degree contained 56 miles ; according to the other, 56⅔ miles. "It was agreed," says Abulfeda, "to adopt the larger measurement" (*Géog.*, vol. I., p. 17). There is some uncertainty as to the exact correspondence of this measurement with our modern ones, and the learned have been able to declare, some that it increased, others that it diminished, the volume of the earth. But the publication of Abulfeda's Geography, with the learned commentaries of M. Reinaud, appears to clear up this point, by showing that the Arabs placed "an identical value" on the ancient and modern mile (*Géog.*, vol. I., p. 18). Now, as it is very certain that what Abulfeda calls the modern mile is the Roman or Italian mile, which is equivalent to 1480 metres in round figures, the Arab standard of 56⅔ miles, which give 20,400 miles for the circumference of the globe, corresponds to 30,192,000 metres. Therefore, notwithstanding their veneration for Ptolemy, who, according to them, gave the earth a circumference of 24,000 miles, since they counted his degree at the rate of 66⅔ miles (Abulfeda, *Géog.*, vol. I., p. 17), or at 7½ stadia per mile, the Arabs really reduced the Alexandrine geographer's true measurement of the circumference of the earth, which he reckoned was 22,500 miles, at the rate of 8 stadia per mile. Their experiment, made between points which they erroneously believed were on the same meridian, could, moreover, only give wrong results. (See on this experiment: Reinaud, *Introduction à la Géog. d'Aboulfeda*, pp. cclix. *et seq.*).

Alfragan's work (*Chronologica et Astronomica elementa*), translated by John of Seville (*Hispalensis*), in the Twelfth Century, was for the first time printed at Ferrara in 1493, and reprinted at Nuremburg in 1537. In 1590 there appeared another translation by Christman at Frankfort (Sédillot: *Hist. des Arabes*, vol. II., p. 270). The edition of 1472, of which Bartolozzi speaks (*Ricerche*, p. 133), never appears to have existed. Delambre has given a long analysis of Alfragan's work (*Hist. de l'astronomie au moyen age*, Paris, 1819, in 4°, pp. 63-69). It is in chapter x. that Alfragan gives the measurement of the earth.

Columbus knew the measurement of Alfragan neither from his works printed nor in manuscript ; he has borrowed what he did know of them from Cardinal d'Ailly's *Imago Mundi*, who had himself copied from Roger Bacon's *Opus Majus* (1267) all that is there said concerning

the Jew, Joseph,[88] and himself have established.[89] In accepting this measurement, Columbus still further reduced the circumference of the earth as given by Ptolemy; since, calculating the equatorial degree at 56⅔ miles, it meant reckoning the largest circumference of the globe at 20,400 miles instead of the 22,500 miles of the Greek astronomer, and, of course, at still less in the latitude of the Canaries.

Alfragan. It was Humboldt who exposed the plagiarism by publishing the two texts (*Examen critique*, vol. I., pp. 65-67). Columbus has annotated several passages of the *Imago Mundi* where mention is made of Alfragan, and of his reduction of the degree to 56⅔ miles. See notes 4, 28, 30, 31, 481, 490, and 491 to that work in the *Raccolta Colombiana* (*Postille ai di P. d'Ailly*, part i., v. 2, of the *Scritti di Colombo* in the *Raccolta*).

[88] This Joseph, or Josepe, or José, was doctor and astronomer to King Joao II. Barros and Las Casas add to his name the word *Judío*. According to Garçao Stocker (*Ensaio historico sobre a origen e progresso das mathematicas en Portugal*), he was a distinguished astronomer (*apud* Denis, *Portugal*, 1846, p. 135). Santos says it was he and Rodrigo who compiled the solar declension tables which were so useful to navigation (*Memórias hist.*, etc., etc., p. 163). It appears he was one of those to whom, later on, King Joao II sent the projects of Columbus for examination, and that he was not favourable to them (Barros, D. I., Book III., chap. xi.).

[89] *Observations made by Columbus.*—Columbus thus expresses himself on this point:—"In sailing frequently from Lisbon to Guinea, in the direction of the south, I noted with care the route followed, as is the custom with sailors. I took at different times the altitude of the sun, by means of a quadrant and other instruments, and I found, like Alfragan, that each degree corresponded to 56⅔ miles, so that one may rely on that measure. We may therefore say that the equatorial circumference of the globe is 20,400 miles. A similar result was obtained by Master Joseph, doctor and astronomer, who, with several more, was commissioned with this duty by the gracious King of Portugal." (Note to the *Imago Mundi: Raccolta: Scritti*, No. 490, *Autografi*, *ibid.*). It is clearly to this note that Ferdinand Columbus refers when, having cited the log-book of Columbus' first voyage, he says that his father has

Did Columbus really make the astronomical observations which enabled him to check the correctness of Alfragan's deductions? The answer must be clearly, no; for these very deductions were wrong. The mathematical operations for determining the measurement, or for checking the measurement, of a terrestrial degree are, moreover, very complicated, and it is not going too far to allege that Columbus was never in a position to carry out such delicate operations. Very probably, as Humboldt suspects, he contented himself with comparing the latitudes obtained with the ship's dead reckoning, and that he was deceived by a long series of erroneous calculations.[90] Perhaps he was already penetrated with the notion that the world was smaller than it was thought to be, when he came across Alfragan's text, which, apparently, gave a scientific basis to his opinion. Anyhow, it remains that, by adopting the measurement recorded by the Arab astronomer, he made the globe smaller by 3,000,000 metres than Ptolemy had found it to be, thus bringing the difference to 10,000,000 metres less than the actual dimensions of the globe.[91]

expressed himself as follows elsewhere: "I have frequently remarked in sailing from Lisbon to Guinea that one terrestrial degree corresponds to 56⅔ miles (*Historie*, chap. iv.).

[90] *Examen Critique*, vol. I., p. 83; *Cosmos*, vol. II., pp. 325 and 566.

[91] *The mile of Alfragan: his measurement of the Globe.*—In order to obtain this result, Columbus rightly supposed that Alfragan's mile was equal to the Italian mile, of which he made use himself (Journal, 13th August 1492), and which was roughly equal to 1480 metres. We therefore obtain for the circumference of the globe the following figures:—

Ptolemy, 22,500 miles	=	33,300,000 metres.
Alfragan, 20,400 „	=	30,192,000 „
Faye, 27,032 „	=	40,007,520 „

Columbus attributed, with good cause, a very great importance to this measurement, for it formed the key-stone of his cosmographical system.[92] It is self-evident that, if he adopted Alfragan's figures at the time of his voyages to Guinea, these faulty calculations must, on account of the very error they contained, have exerted a great influence on the formation of his scheme. But there are no reasons to believe that such has been the case. These calculations, however, furnished Columbus with one of the main features of the geographical conceptions he formed later on: the notion that the earth is not as large as it is believed to be.[93]

Humboldt, who has gone into this question, has made a calculation which leads him to believe that, far from diminishing the circumference of the earth, Alfragan increases it (*Examen critique*, vol. II., pp. 325-326). For different reasons, Vivien de Saint-Martin also thinks the Arabs increased the circumference of the earth (*Hist. de la Géog.*, p. 252). This opinion cannot prevail against the assertion of Abulfeda, who explains that the ancient mile—*i.e.* the Roman mile—and the modern mile—*i.e.* the Arab mile—have an identical value (*Géog.* t. I., p. 18), and who bluntly declares that the Arabs diminish the extent of the circumference of the globe: "This extent," he says, "is greater with the ancients than with the moderns" (*ibid.*, p. 17). The learned translator and commentator of Abulfeda, M. Reinaud, says the same thing: "The circumference of a large circle, according to the ancients, was 8000 parasangs; according to the Arabs, it measured only 6800" (Introduction to the *Géog. d'Aboulfeda*, p. cclxxii.). Here it is not a question, as Vivien de Saint-Martin has supposed, of the circumference established on the length of a degree taken on a mean parallel, but of the actual equatorial circumference.

[92] The stress Columbus lays on this measurement, by frequently mentioning it, shows what importance he assigned to it. As we have indicated above, he has written it seven times on the margin of the *Imago Mundi* alone. He does not content himself with merely writing it down; several times he explains it in detail, and avers that he has checked and found it to be accurate. (See notes 87, 89, and 93.)

[93] Columbus was thoroughly imbued with this idea. "Aristotle says that this world is small, and that there is very little water," he writes in

II.—THE UNKNOWN MARITIME SPACE: ESDRAS.—It was not only the volume of the earth that Columbus diminished: he also reduced the maritime space which separated the ends of the Continent or known earth. In the course of his reading he had met with a Biblical text whence he drew this conclusion. It occurs in two verses of Esdras, wherein it is said that only one-seventh of the earth is covered by the waters.[1] Columbus, whose want of the critical faculty has made him commit some singular

... letter from Hispaniola, 1498 (Navarrete: *Viages*, vol. I., p. 261.—Major: *Select Letters of Columbus*, p. 145). "The world is a small matter," he says again, in his letter of the 7th June 1503; a little further on he intensifies this remark: "I tell you again that the world is not so large as the vulgar suppose: a degree measures on the equator 56⅔ miles: that is a fact one can touch with one's finger" (Navarrete: *Viages*, vol. I., p. 322.—Major, *loc. cit.*, p. 184).

[1] *The verses of Esdras.*—Neither d'Ailly nor Columbus quotes the passages from Esdras of which they both speak. The first gives a reference to the Fourth Book, the second to Books III. and IV. They will be found in Apocrypha II. 2, verses 42 and 47 (*The Apocrypha ... the Authorised Version*, University Press, Oxford, brevier, 16°). Esdras relates the Creation in an invocation he addresses to God:—

"42. Upon the third day thou didst command that the waters should be gathered in the seventh part of the earth: six parts hast thou dried up and kept them, to the intent that of these some being planted of God and tilled might serve thee.

"47. Upon the fifth day thou saidst unto the seventh part, where the waters were gathered, that it should bring forth living creatures, fowls and fishes, and so it came to pass." (*The Apocrypha according to the ... Version*, University Press, Oxford, brevier, 16°).

The Fourth Book, termed in Apocrypha, of Esdras is not canonical, but the Fathers of the Church accord it a great authority, and this ... does not forget to say. See on this Book the *Dissertation* of ... in his French and Latin *Bible*, Paris, 1724, 8 vols. fol., vol. ... and on the verses in question: Humboldt, *Examen critique*, ... A. D. White, *A History of the Warfare of Science ...*, vol. I., pp. 111-113.

errors of judgement, and who believed blindly in the Scriptures, took quite literally this text of Esdras, and inferred from it that, if the solid parts of the earth occupied six-sevenths of the whole, the maritime space which outspread westward from the shores of Europe could not be very large.[95]

[95] *The Opinions of Esdras, d'Ailly, and Columbus on the small extent of the Sea.*—In chapter viii. of the *Imago Mundi*, entitled *De quantitate terræ habitabilis*, d'Ailly developes the idea that the habitable earth has a great extent in comparison with what is covered by the waters; and in support of this theory he quotes Aristotle, Averrhoes, Pliny, and particularly Esdras, who has written that six parts of the earth are inhabited, and only the seventh is occupied by the waters. Columbus has literally covered the margins of the page of the *Imago* devoted to this subject with a commentary, wherein he notes especially the language of Esdras, and seeks to show that his assertion respecting the extent of lands and seas is well founded. This commentary, and the whole page of the *Imago* round which it runs like an embroidery, are transcribed and reproduced in facsimile in the volume of the *Raccolta Colombiana*, *Autografi*, No. 23, p. 70, and another transcription is given in the volume *Scritti* under the same number, p. 376.

In the account of his third voyage (Hayti, 1468), Columbus returns to this subject, and expands it at considerable length. The passage deserves to be reproduced in its entirety:—

"The Master of Scholastic History says, in writing on Genesis, that the waters are not very abundant; that when they were created they only covered the whole earth because they were vaporous and like fogs, and that when they solidified and united they occupied very little place. Nicholas de Lyra expresses the same opinion. Aristotle says this world is small, and that there is not much water, and that one can pass easily from Spain to the Indies; Avenruyz (Averrhoes) confirms this view, and Cardinal Pedro de Aliaco (Pierre d'Ailly) quotes him, and supports this opinion, which agrees with that of Seneca, by saying that Aristotle may have learned many secret things about the world from Alexander the Great, Seneca from Cæsar Nero, and Pliny from the Romans. The same cardinal attributes to these writers a greater authority than to Ptolemy and others, Greeks or Arabs; and, in order to confirm what they say respecting the smallness of the waters and of the trifling proportion of the earth covered by them, in comparison with what is reported by

Columbus found, therefore, in the two quotations from Alfragan and Esdras which had come to his knowledge—we shall show in what manner later on—the essential basis of his geographical theory: namely, the smallness of the globe, and the relative littleness of those parts covered with water compared with those that were left uncovered. A third author, Marinus of Tyre, supplied him with the necessary elements for giving to his system a rational and scientific appearance.

III.—EXTENSION OF ASIA EASTWARD: MARINUS OF TYRE.—Marinus of Tyre, as has been said elsewhere,[96] fixed his meridians from hour to hour; that is to say, the space included between each was of 15 degrees, thus representing an hour of the daily revolution of the earth. His first

Ptolemy and his followers, he finds a passage in the Third Book of Esdras, wherein that sacred writer says that of the seven parts of the world six are uncovered, and the other is covered by water; and this assertion (*la qual autoridad*) is sanctioned by holy personages, such as Saint Augustine and Saint Ambrose in his *Hexameron*, who accord credit to the Third and Fourth Books of Esdras" (Navarrete: *Viages*, vol. I., *Tercer Viage*, letter of 1498, p. 261).

In the letter, called *rarissima*, which is dated 1503, Columbus again states his opinion on this point, without however naming Esdras. "The world," he says, "is small, being composed of six dry parts, and of a seventh which alone is covered with water" (Navarrete, *ibid.*, vol. I., letter of 7th July 1503, p. 300). Finally, the author of the *Historie*, enumerating the reasons which influenced his father, recalls that Pedro de Aliaco, in chap. viii. of the treatise above mentioned, and several other writers have affirmed that Europe and Asia are close together, and that the maritime space which stretches between them is not very considerable (*Hist.*, chap. vii., fol. 15, recto).

[96] See after, in Second Part: *The Map*, and before, chap. iii., sect. 10, and notes 76 and 77; see also note 98.

meridian passed through the Fortunate Isles, which he supposed were 2½ degrees west of Cape St. Vincent, and the 15th meridian he drew at Sera, Catigara and Thinæ, or 225 degrees to the east; so that there remained only 135 degrees to complete the circumference of the globe, these being assigned to the maritime portion of the sphere. Ptolemy, who describes the system of Marinus, points out that he was in error in giving so wide an extent to the habitable earth, and reduces his 225 to 180 degrees; thus dividing the globe into two equal portions, each of 180 degrees, one being assigned to the solid element and the other to the liquid.[97] This was still a great deal too much, considering there are but 130 degrees from the western coasts of the Spanish peninsula to the most eastern extremities of the Indies. Columbus bluntly rejects the correction Ptolemy introduced into the dimensions Marinus of Tyre had assigned to the known world, and declares that the expeditions of the Portuguese have proved that Marinus was right, or had at least approached very closely to the truth.[98] Far from diminishing the 225 degrees which Marinus of Tyre had determined was the

[97] Ptolemy, *Geog.*, Book I., chaps. xi. to xii. On Marinus of Tyre, see Gosselin: *Recherches sur le système géographique de Marin de Tyr*, in his *Recherches*, etc., Paris, An VI., v. ii., pp. 31-74.

[98] *Limits of the known world according to Marinus of Tyre and Columbus.*—Columbus, *Carta rarissima*, 1503.—Navarrete, vol. I., p. 300.—Major's *Select Letters of Columbus*, p. 183. Here is the Spanish text of this important passage:—

"Tolomeó creyo de haber bien remedado á Marino y ahora se falla su escritura bien propincua al cierto. Tolomeó asienta Catigara á doce lineas lejos de su occidente, que el asentó sobre el cabo de san Vincente en Portugal dos grados y un tercio. Marino en quince lineas constituyó la Tierra é terminos. Marino en Etiopia escribe al Indo la linea

extent of the known world, Columbus still further enlarges it. He remarks that the greater part of the earth has been already overrun; that towards the west the Portuguese have

equinocial mas de veinte y cuatro grados, y ahora que los Portugueses le navegan le fallan cierto."

This text is sufficiently obscure, and it has been the despair of translators. The Abbé Morelli, who has given an Italian version of the entire letter; M. Urano, who was the first to translate it into French; M. de la Roquette, who has also made a translation; and M. Pinart, who is responsible for another—have all failed to give it an intelligible meaning, because they failed to take into account the geographical system of Marinus of Tyre, and the modifications Ptolemy had introduced therein. Major's translation, although better than the others, is nevertheless defective. He has failed to understand the words *Etiopia escribe al Indo*, which he renders by *describes the Indus in Ethiopia*, which is absurd (*loc. cit.*, p. 183). Letronne, who forgets that to the Portuguese of that time Ethiopia was part of India, has been no more fortunate in comprehending this portion of the phrase, which he considers devoid of meaning (*Relation des quatre voyages*, vol. III., p. 120, note). We render this text as follows:—

"Ptolemy thought he had exactly corrected Marinus; but now it is found that what Marinus wrote was very nearly true. Ptolemy placed Catigara at twelve hours—*lineas*=horal lines—beyond his west (that is to say, beyond his first meridian), which he drew at 2½ degrees beyond Cape St. Vincent (that is to say, more to the west at the Canaries). Marinus enclosed the limits of the world (the inhabited land, the Continent) within fifteen hours (lineas). He placed the Ethiopia of the Indies (Abyssinia) at more than 24 degrees this side of the equator. And now that the Portuguese sail there, they have found that this was exact."

In the preceding passage, and in the one quoted in note 95, it is Columbus himself who speaks. His son thus expresses himself:—"The fifth reason which led the Admiral to believe that the distance by this route (the westward one) was short came to him from Alfragan and his disciples, who held that the circumference of the globe was much smaller than it was considered to be by the other cosmographers, inasmuch as they only reckoned 56⅔ miles to the degree. From this Columbus inferred that the earth being smaller, its third part, which was unknown to Marinus of Tyre, must necessarily be limited. Conse-

pushed their expeditions as far as the Azores and the isles of Cape de Verde, while, it is to be remembered, towards the east Marinus himself did not know the furthest limits of the Continent; consequently, in order to ascertain the whole globe, there remains but to cross the maritime section which lies between the eastern limits of the Indies and the islands of the Azores and of Cape de Verde, which section cannot be more than one-third of the entire circumference of the globe, since Marinus already knew fifteen out of the twenty-four hours of this circumference, and owing to recent discoveries there now remained only eight instead of nine hours to be discovered.[99]

quently this portion might be crossed in a shorter time than was supposed, since the eastern confines of the Indies had not yet been discovered, and they were sure to be found nearer to us on the west" (*Hist.*, chap. vi., fol. 13).

To these proofs, already so convincing, that Columbus had borrowed his fundamental idea from Marinus of Tyre, a third may be added: the evidence of Bartholomew, Columbus' own brother, and the cosmographer of the family. On the third sheet of the curious map which Bartholomew Columbus either brought to Rome or constructed there in or about 1506, and which was discovered by Wieser, may be read the legend: "Secondo Marino e Colombo da San Vicentio a Cattigara, g. 225, sono hore 15. Secondo Ptolomeo infino a Cattigara, g. 180, che sia hore 12." According to Marinus and Columbus, from Cape St. Vincent to Cattigara there are 225 degrees, or 15 hours; according to Ptolemy, to Cattigara there are 180 degrees, or 15 hours" (Wieser: *Die Karte des Bartolomeo Colombo*, Innsbruck, 1893, p. 7).

Here appears to be conclusive proof of the fact put forward by us, that the whole cosmographical system of Columbus was based on that of Marinus of Tyre.

[99] This last part of the cosmographical system of Columbus is explained by his son in chap. vi. of the *Historie*—a chapter which certainly belongs to Ferdinand Columbus; for Las Casas, who has reproduced it in his fifth chapter, says that he borrowed it from him. In this chapter

IV.—ORIGIN OF THE COSMOGRAPHICAL IDEAS OF COLUMBUS: TOSCANELLI'S CORRESPONDENCE HAD NOTHING TO DO WITH IT.—Add to the outlines already sketched the different items of information supplied by Marco Polo on the islands and the countries of the Far East, and we shall have, so far as they bore upon his great design, all the essential elements of the cosmographical and geographical system that Columbus had drafted for himself.[100] There is nothing else in the letter to Martins. The cosmography of Toscanelli—if indeed he be the author of the letter—was, therefore, identical with that of Columbus. By itself this fact does not form a presumption against the authenticity of the letter, for it is urged that it exerted a determining influence on Columbus, in which case it would be quite natural to find it contained the ideas which had inspired the great navigator.[101]

But the question changes completely if it were elsewhere than in the correspondence of Toscanelli that Columbus

Ferdinand Columbus enlarges on the reasons which led his father to think that the maritime space he proposed to cross was not very great; he adds that Columbus, in support of his opinion, appealed to the views of Strabo, Ctesias, Nearchus, Pliny, Onesicritus, and of Alfragan (*loc. cit.*, fol. 4 b).

[100] In order to complete the description of Columbus' geographical system, one ought to mention his ideas as to the shape of the earth and as to the situation of the terrestrial paradise; they are certainly singular enough. But these ideas, or rather dreams, are without any scientific value and hold no place in the group of speculations which may have exercised some influence on the practical determinations of Columbus.

[101] See on this point the very curious article by M. de Lollis already quoted (*Chi è scoperto l'America?*—wherein he makes out Columbus to have been an ignoramus who owed everything to fortune; in this he would have been right had the letter to Martins been genuine.

obtained his cosmographical theory; it will shortly appear that such was the case. Columbus, who was not a scholar, and whose stock of Latin, as Bernaldez remarks, was limited, did not know at first hand one of the authors he quotes; nevertheless we are aware, for he himself tells us, how he became acquainted with their opinions.

It was from Cardinal d'Ailly's *Imago Mundi*, a copy of which he possessed, and has covered with notes, that he learned the Arab astronomer, Alfragan, made the globe smaller by 3,000,000 metres than Ptolemy reckoned it to be, by reducing the length of the degree to 56⅔ miles—a distance which became his fundamental measure, as is proved by his frequent reference to it.

From the same work Columbus obtained Esdras' opinion that the portion of the globe covered by water bore but a small proportion to the rest, which consisted of the continents.[102]

[102] Columbus himself says, in his report of 1498 to the Catholic kings, that it was Cardinal d'Ailly who acquainted him with the opinion of Esdras as to the smallness of the waters compared to the lands. The passage is quoted in note 95, where also will be found a reference to the page of the *Imago Mundi* bearing on this subject, which Columbus has annotated with his own hand (No. 23 of the *Scritti*, and the *Autografi* of the *Raccolta*.

In the account of this same third voyage which Las Casas has given from Columbus' Diary, and which is fuller than the one made to the Catholic kings, we find the same mention of Esdras, with a reference to Book IV., chap. vi. But in these passages it is difficult to distinguish whether it is Columbus who speaks, or Las Casas who comments his text (see Las Casas: *História*, vol. II., pp. 264-67). M. de Lollis has suppressed a part of these passages in his reproduction of this account (*Scritti*, etc., vol. II., p. 22).

In his book *Profecías*, Columbus mentions chaps. i., iii., and iv. of Esdras (*Scritti*, vol. II., p. 159). In a note he has written on his copy of Pliny, he again mentions Esdras, but only for the purpose

From this small treatise he furthermore learned the opinion of Aristotle respecting the closeness of the Indies to Spain.[103] It was from the same work, and perhaps also from Ptolemy's Geography, of which there exists a copy of the 1478 edition bearing his mystic signature, Columbus acquired the knowledge of Marinus of Tyre reckoning only 135 degrees (9 hours) between the extremities of the continent.[104]

of showing that St. Augustine looked on him as a prophet (note No. 856 of the *Scritti*, vol. II., p. 366).

[103] *Scritti*, *loc. cit.*, note 23.

[104] Letter of the 7th July 1503 (*Scritti*, vol. II., pp. 183-84; passage quoted, note 98.—Note to chap. viii. of the *Imago Mundi*, No. 23 of the *Scritti*, vol. II., p. 377).

In the notes he has written on the *Imago Mundi* Columbus only once mentions Marinus of Tyre; and although it is evident to anyone who takes the trouble to read his annotations to that work, and what he says of Cardinal d'Ailly in his account of his third voyage, that it is to him he is indebted for, if not all, at least the greater part of his cosmographical ideas, it may be it was from some other source he learned the system of Marinus of Tyre, which he has accurately summed up in his letter of the 7th July (see note 98). Everything tends to show it was through Ptolemy he gained his information on the subject; for he mentions, only, however, to reject it, the correction Ptolemy had made to Marinus' calculations—a fact not greatly to the credit of Columbus' knowledge or critical acumen.

Columbus, whose whole scientific and literary equipment appears to have been borrowed from the works of the few authors he has annotated—Pius II, d'Ailly, Pliny, Marco Polo, Plutarch and Ptolemy,—has contented himself by placing his name and a verse of Scripture to the latter's geography, while he has simply covered with notes the works of the other five. But, as d'Ailly alone mentions the correction that was known to him, we may suppose, although he has neglected to annotate the volume of the Alexandrine geographer, it was there he got the notion Asia extended to the 225th meridian—a notion which, with the measurement of Alfragan, formed the double

It was the personal knowledge he had of the discoveries of the Portuguese towards the west that made him reduce these 135 degrees to about one-third the circumference of the globe.

It was the opinions put forward by the ancients, and reproduced pretty well everywhere, that led to his conviction that this space might easily be crossed. Finally, it was Marco Polo, of whom a copy exists annotated by Columbus who informed him of the existence of the islands and countries of Eastern Asia he so frequently mentions, and for which he vainly sought on each succeeding voyage.[105] Here are, after Columbus himself, the sources of his cosmographical conceptions; and what he says on this subject, or what he permits to be seen, cannot be questioned, inas-

basis of his cosmographical conception: the smallness of the globe, and of the maritime space remaining unknown.

Furthermore, the source whence Columbus took the fundamental conception of Marinus of Tyre matters little. What is of importance is that he did not owe it to Toscanelli; of this there can be no doubt, because it was only a person ignorant of mathematics who could adopt such an idea, the error of which Ptolemy demonstrates in the very place where he records it.

[105] On this point there can be no doubt, for all the information we find in the letter to Martins borrowed from Marco Polo is annotated by the hand of Columbus himself, or in that of his brother, on the copy of that traveller's work which they possessed. For instance, the letter expatiates on the importance of the harbour of Zayton, into which enters yearly more than one hundred ships laden with pepper. Marco Polo states "that for one shipload of pepper that goes to Alexandria . . . there come a hundred such, aye, and more too, to this haven of Zayton" (Yule's *Marco Polo*, vol. II., p. 217); and Columbus writes opposite this passage: "Naves in hieme vadunt, in æstate redunt. Portus Zaizen, id est caput de Alpha" (*Postille al libro di Marco Polo*, No. 272 in *Scritti di Colombo*, vol. II. of the *Raccolta*).

[illegible] as he reveals unintentionally the very fountain heads from which he borrowed, whereas the correspondence with Toscanelli does not furnish a single name. The letter to Martins and the map which accompanied it count, therefore,

[illegible] of the Great Khan, who is the king of kings. [illegible] "The great kaan is the lord of all Tartars" (Yule, [illegible] and Columbus puts on the margin, "Magnum [illegible]

[illegible] of the Great Khan is in the [illegible] "The great kaan resides [illegible] vol. I., p. 354). Columbus [illegible] "Cathay Provincia" [illegible]

[illegible] sent ambassadors to the [illegible] of learned persons [illegible] from Marco Polo, who says: [illegible] would send as many as [illegible] vol. I., p. 13); [illegible] "Misit legatos ad Pontificem" [illegible]

[illegible] which have furnished some of the [illegible] are not the only ones: [illegible] refer to Cathay, [illegible] mentioned in this [illegible]

[illegible] his copy of Marco [illegible] the letter to Martins. [illegible] passages, how comes it [illegible] which caught the attention [illegible] here a matter of [illegible] that Columbus [illegible] characteristic of the [illegible] and annotate in Marco [illegible] by Toscanelli? [illegible] that these annotations of the [illegible] which belongs to Marco [illegible] Columbus, and the very source [illegible] Martins drew his information?

for nothing in the fundamental geographical conceptions of Columbus.

If it were necessary to support this conclusion by further argument, we would observe that Ferdinand Columbus, in the chapter of his book where he enumerates at length the scientific reasons which decided his father, and cites the authors who had suggested them, does not include Toscanelli among them. He points out the share d'Ailly, Alfragan, and, in particular, Marinus of Tyre had in the formation of Columbus' cosmographical system, and only mentions the learned Florentine as encouraging and confirming his father in his views.

Las Casas says exactly the same thing in those portions of his book which correspond with those of the *Historie* we have just quoted. Elsewhere, it is true, he lays stress on the influence the letter and map of Toscanelli had upon Columbus; but it is no less true that neither Las Casas nor Ferdinand Columbus attributes any part to Toscanelli in the genesis of the cosmographical conceptions of Columbus.[106] The idea that Columbus owes everything to Toscanelli is a modern one, and arises from the 1474 date borne by the letter to Martins. It is clear, if this letter was written then and was soon afterwards communicated to Columbus, that it might have been the mainspring of his system; but we have shown this system had a widely different origin, and we have just seen that even Las Casas and Ferdinand Columbus themselves confirm this view. Where the Bishop of Chiapas and the son of Columbus lead us astray is when they put forward that Columbus had formulated his system prior to his discovery, and that this discovery was the

[106] *Historie*, chaps. vi. and vii.—*Histôria*, chap. v.

practical consequence of his theory. The order of events was just the opposite: it was the theory which followed the discovery.

V.—THE COSMOGRAPHY OF THE LETTER TO MARTINS IS BORROWED FROM COLUMBUS.—If Columbus owes nothing to the correspondence attributed to Toscanelli, and if nevertheless, as is undeniable, the cosmographical ideas expressed in this correspondence and in Columbus' own writings are absolutely alike, how are we to explain this remarkable identity?

Did the author of the letter to Martins draw his information directly from the sources known to Columbus only through the medium of the *Imago Mundi*, and had he therefrom, some fifteen or twenty years beforehand, formed exactly the same cosmographical system? It can only with difficulty be believed. For Columbus the task was comparatively easy, as he found the principal elements for his system ready collected in the book by Cardinal d'Ailly. It was not the same for Toscanelli, who is supposed to have written in 1474, before the publication of the *Imago Mundi*, and before the printing of Ptolemy, who is the sole source for all we know concerning Marinus of Tyre. Even if they had been inspired by the same documents, Columbus and he would not, certainly, have arrived at identical results. Toscanelli, for instance, had no grounds for reducing to 130 degrees the 135 degrees Marinus assigns to the, as yet uncrossed, maritime zone; the author of the letter to Martins does, however, make this reduction: on the other hand, Columbus, who knew

of the Portuguese discoveries, was fully justified in thus correcting the figures of Marinus of Tyre.

We must, therefore, reject the hypothesis that Columbus and the writer of the letter to Martins have, each independently, drawn from the same sources and with a like result. Either it was Columbus who copied the letter to Martins, or it was the author of that letter who copied Columbus; and, as we have shown Columbus could not have been the copyist, it follows it must have been the writer of the letter. From this it also follows that the writer in question could not have been Toscanelli, since he died in 1482—a period at which Columbus had not yet formed his cosmographical system, as we are now about to show.

VI.—COLUMBUS' COSMOGRAPHICAL SYSTEM IS POSTERIOR TO HIS DISCOVERY.—If Columbus is in no way indebted to the documents bearing the name of Toscanelli, and dated anterior to the discovery of America, and if it was by himself he acquired the ideas from which he built up his system, another and a very important question arises: to what period does that system belong? This question is not one of simple curiosity; it has a great interest for the history of the development of the ideas which led to the discovery of the New World. It behoves the critic, in fact, to know if the great event, which, after thousands of years of civilisation, came to reveal suddenly to man that he had known but half of that world of which he thought himself the master, was due to a happy accident arising from chance information of unscientific character heard by the discoverer, or was the result and

logical sequence of the deliberate application of a cosmographical conception, whether erroneous or not. In a word, was Columbus guided on his first voyage by a scientific theory, or by information received from sailors?

In order to reply to this question, we should be able to fix at what period Columbus acquired the notions which form the basis of his system. Unfortunately, this is not easy to be done. Let us, however, see what can be said on this point.

Columbus may have known at the time he conceived the idea of his enterprise all the purely geographical details of this system, such as all that relates to Cipangu, Zayton, the Great Khan, and other items borrowed from Marco Polo. He possessed a copy of this traveller's work, which he has annotated, and we can see from the first lines of his journal, August 1492, that he seems to be posted in these matters. But Marco Polo, an exact and truthful reporter, was neither a scholar nor a theorist, and from him Columbus could only obtain information of a practical nature; such, in fact, is all he does borrow from that traveller. As to the scientific part of his system, almost entirely due to quotations made from the *Imago Mundi*, it is certainly of more recent date.[107]

[107] The *Imago Mundi* of Cardinal d'Ailly (Petrus Aliacus or Pedro de Aliaco) is a collection of twelve short treatises written by the Cardinal, and of a few pieces from Gerson's pen. Four of d'Ailly's twelve treatises deal with cosmography. The first and the most important, which has given its name to the work, is the *Imago Mundi*; the second is entitled *Epitome Mappe Mundi*. These were the two treatises which drew Columbus' attention, and literally he has covered their margins with notes, the reading of which reveals that it was

As has been shown above, it is through this work Columbus became acquainted with the authors who suggested to him the fundamental ideas of his cosmographical theory: Alfragan, from whom he borrows the measurement of the earth; Esdras, who supplies him with his idea of the smallness of the seas compared with the extent of the continents; Seneca, Aristotle, and the other ancient writers, who convince him that the maritime space dividing the two extremities of the earth may be easily passed over. If we knew exactly the date of printing of this treatise to which Columbus so often has recourse, we should know the earliest period in which

there he had found his geographical system. Here is what Las Casas says on this subject: after speaking of the ancient writers whom Columbus had studied, he comes to the moderns, and thus expresses himself:—

"In the front line comes that which Pedro de Aliaco (Pierre d'Ailly) says in his books of astrology and cosmography. I firmly believe that this doctor has had greater influence in the decisions of Columbus than the authors we have previously cited. His book was so familiar to Christopher Columbus that he has completely annotated it with his own hand in Latin, and has covered its margins with writing, wherein he records a crowd of things he had read or gathered elsewhere" (Las Casas, *História*, Book I., chap. xi., vol. I., p. 89).

As Humboldt has remarked (*Examen critique*, vol. I., p. 61), it is probable, if not actually certain, that it was also from this work he borrowed all he says of the opinions put forward by the ancients on the points with which he was occupied. This precious volume passed to Ferdinand Columbus, and to-day forms part of the Columbina at Seville. Varnhagen was the first to call attention to the notes it contains. These are now all available to students, M. de Lollis having wholly reproduced them in facsimile, with a transcription opposite, in his volume *Autografi di Colombo* of the *Raccolta Colombiana*, and has given another transcription, with the text of the passages of d'Ailly which suggested the annotations, in the *Scritti di Colombo* volume of the same collection.

he could have had it in his hands, and this would be most valuable information in determining the genesis of the great navigator's ideas. But this small bibliographical problem, which would here have great importance, has not yet been solved. All that can be said is that the *Imago Mundi* could not have been printed before 1480.[108] It is therefore at that date, at the earliest, that Columbus could have written on the margins of this volume the notes which bear witness to the loans he has made from it. But these notes may be later than this date, and there are several reasons for supposing that such, in fact, is the case. Thus it is only in the later writings of Columbus that we find he refers to the ideas which constitute the very foundation of his cosmography; it is in the letter of 1498 that he speaks of Esdras, of Aristotle, and of several more; it is in the letter called

[108] There has been only one edition of the *Imago Mundi*, and that was printed at Louvain by John of Westphalia. All bibliographers agree in thinking that the date of printing could not have been earlier than 1480, or later than 1490 or 1492. The compiler of the Catalogue of the Columbina, Señor S. de la Rosa, places it between the years 1480 and 1483. *Catálogo*, vol. I., p. 51, and vol. II., p. xxiii. The Abbé Salembier, to whom we are indebted for a learned treatise and an interesting study on Cardinal d'Ailly, and who has visited most of the libraries possessing a copy of the *Imago Mundi*, thinks it was printed about the year 1480 (*Un évêque de Cambrai*, Lille, 1892, p. 10). Margry considers it was printed as early as 1472 (*Navigations*, p. 101). The date accepted by Humboldt (*Examen critique*, vol. I., p. 62) and by Mr Harrisse (*C. Colomb*, vol. II., p. 190) is 1490, the one given by Jean de Launay (*Joannis Launoii, Regii Navarræ*, etc., 1677, vol. II., p. 478). But some years ago it was found that a copy of this book belonging to the Royal Library of Stockholm contained a note indicating that it had been purchased in 1487. The book was therefore printed between 1480 and 1487.

rarissima, written after his fourth voyage, that he gives for the first time the opinion of Marinus of Tyre as to the extension of Asia towards the East, which opinion occupies so important a place both in his system and in the letter to Martins, where the 135 degrees, remaining unknown to Marinus, are transformed into 26 spaces; there, too, he quotes several other authors in support of his assertion as to the smallness of the earth.

If Columbus had known the *Imago Mundi* and Ptolemy before his first voyage, it is more than probable that, in the voluminous journal he has written of that voyage, he would have made some allusion either to the authors to whom he owed his ideas, or to the ideas themselves. He has done nothing of the kind. This fact authorises us in believing that Columbus only knew the *Imago Mundi* and Ptolemy late in his career; and that, consequently, the notions resuming his cosmographical system, the smallness of the earth and the great extent of the land in opposition to the sea, only came to him after he had effected his first, and very likely not till after his third or even fourth, voyage.

VII.—A RÉSUMÉ: THE LETTER TO MARTINS, WHICH REPRODUCES THE IDEAS OF COLUMBUS, IS SUBSEQUENT TO THE DISCOVERY OF THE NEW WORLD, SINCE, AT THAT PERIOD, COLUMBUS HAD NO SCIENTIFIC THEORY.—The first observation suggested by the above statement of facts is that Toscanelli was in no way concerned in drafting a correspondence of which all the ideas have been borrowed from Columbus, who himself had not formed them until long after the death of the Florentine astronomer.

The second observation to be made, but from quite another point of view, is of the greatest interest: it is that, contrary to received tradition, Columbus, when he sailed on his ever memorable voyage, had not yet formed his cosmographical system, and was, consequently, guided by no scientific opinion whatever. He evidently had some kind of a plan, for he first submitted it to Portugal and afterwards to Spain. But beyond his own assertions, as Las Casas and Ferdinand Columbus have reported them to us, there exists not a shadow of proof that this plan was based on the cosmographical considerations which the discoverer subsequently formulated. If it be true that as early as 1483, approximately the date of his voyages to the coast of Guinea, he already knew Alfragan's measurement of the globe, and had acquired the conviction that the world was relatively small, we may, by stretching a point, admit that the general conception of his system dates back to that period of his life, since his system rests entirely on that first fundamental notion, and, in fact, Las Casas and Ferdinand Columbus assure us that Columbus had indeed made this deduction.[109] But this is very unlikely. A cosmographical conception like the one outlined does not take shape all at once. From the fundamental idea that the world is smaller than it is supposed to be to the one that the space still unknown of the terrestrial

[109] "From this opinion—that of Alfragan and of Columbus himself, that the degree only measured 56⅔ miles—Columbus inferred that, the entire sphere being small, the part which formed the third, and which Martinus considered as unknown, must necessarily be also small, and was navigable in a shorter period of time." Las Casas, *História*, chap. v., vol. I., p. 57. The corresponding paragraph in the *Historie* is to be found, chap. vi., fol. 13.

sphere forms but a third of the whole, and does not embrace a greater extent than 130 or 120 degrees, is a very long way. The human mind does not move in leaps, and it would be contrary to all logic to imagine that at one bound Columbus had arrived at conclusions which, although contained in known premises, cannot be unravelled except by repeated efforts suggested by observations and considerations of many kinds.

We may therefore be permitted to believe that many of the theoretical considerations Columbus enumerates, in order to explain how he came to conceive and develop his project of discovery, only attained their maturity after that discovery had been accomplished. There would, it may be added, have been nothing surprising or illegitimate had such been the case. It is a natural process for the human mind to desire to find an explanation for what has happened, and Columbus had a perfect right to seek in the authors he knew considerations and arguments which should justify his undertaking. Nor must it be forgotten that Columbus had enemies who in his own day said—we shall see later on what grounds[110]— that what he had discovered had been told to him; and that very naturally these criticisms led him to exaggerate the part his theoretical ideas had played in his discoveries, and to lessen the share chance had had therein.

If, from the number of things which contributed to lead Columbus into the career he was to follow, we take away the correspondence with Toscanelli and the ideas that were suggested to him by reading the *Imago Mundi* and Ptolemy, there will remain no other source of infor-

[110] See later, chap. v.

mation from which he could form his conviction than the gossip current in his day in Portugal respecting the isles and lands which it was believed had been seen in the unexplored regions of the Atlantic. There, in all probability, was the principal source of the ideas whence sprung the project of Columbus. We are not justified in finding its origin in the cosmographical speculations of authors either of ancient or mediæval times, with whose writings he was late in becoming acquainted, or in the pretended correspondence with Toscanelli, of which he never breathed a word.

Nevertheless, we hesitate to conclude that Columbus' great undertaking was suggested merely by reports as to the existence of new lands to the west and of the possibility of reaching them. The information contained in these reports did not come to him all at one time, and he could not have given shape to their meaning except by close study and submitting them to a careful critical analysis, which presupposes on his part some acquaintance, for purposes of comparison, with the data then in the possession of seamen and cosmographers. We do not think, however, we are venturing too far when we say there is every reason to believe that, when Columbus undertook his first voyage of discovery, the grounds he relied on were rather practical than speculative.

We therefore sum up this chapter as follows:—

The cosmographical ideas expressed in the correspondence attributed to Toscanelli and found in the writings of Columbus are exactly identical.

Columbus has borrowed nothing from this correspondence: we know the sources whence he drew his information.

Toscanelli could not have drawn from the same sources, and, if he had been able to do so, he would not have come to the same conclusions. The cosmography of the letter to Martins is borrowed from Columbus himself.

The cosmographical system of Columbus dates from after his discoveries.

The author of the letter to Martins, being only able to borrow from Columbus after this period, cannot be Toscanelli, who died in 1482.

Columbus, when he embarked on his great enterprise, had no scientific theory whatever.

CHAPTER V

POSSIBLE MOTIVES FOR THE FRAUD.

I.—NECESSITY OF A MOTIVE FOR THE SUSPECTED FRAUD.—However convincing they may be, all the objections raised against the authenticity of the correspondence of Toscanelli with Martins and with Columbus would lose some of their force if no motive could be assigned for the deceit. It is a juridical and logical axiom that all human actions are deliberate, and that one does not, for example, resort to fraud without some definite object. It is therefore necessary to seek for the causes which may have suggested inventing the idea of a correspondence wherein a celebrated astronomer is supposed to have pointed out to Columbus the scientific reasons which told in favour of a route to the Indies by the west rather than by the east.

There can be no doubt, if fraud there be, that it was committed in the interests of Columbus. For it was to Columbus Toscanelli is credited with sending a copy of his letter to Martins; the Latin text of the letter was found on a volume known to have belonged to Columbus, and the authorised biographers of the great Genoese, Las Casas and Ferdinand Columbus—or whoever were the authors of the *Historie*—are the only writers who speak of this correspondence; no other hypothesis is therefore admissible.

It is not so easy to settle what were those interests. If,

however, one refers to the letter to Martins, it will be seen that, in its general character, it claims to be a cosmographical theory, whence may be drawn the possibility and the easiness of reaching the East Indies by the west, without having recourse to information derived from pilots. It may therefore be that this letter was imagined to prove Columbus did not owe his discovery to a happy chance, or to the positive information he may have gathered from the reports of pilots and the tales above mentioned current at his time, but to the application of a scientific theory which his studies and his nautical experience had enabled him to formulate, and which a scholar like Toscanelli had sanctioned.

II.—THE PILOT WHO MAY HAVE INFORMED COLUMBUS.—What gives great probability to this supposition is that Columbus has been really charged with having obtained information, which rendered his discovery easy, from a pilot who had been blown to one of the Antilles by continued stress of weather. In the earliest days after the discovery it was, in fact, a generally received opinion, even among the very men who had accompanied Columbus on his first voyage, that the route to be discovered had been revealed to him by a sailor who had actually crossed the Atlantic, and who had died before he could himself profit by the accidental discovery he had made. In this connection it should be remarked that in Columbus there is noticeable a constant anxiety to lay emphasis on his experience as a sailor and his learning as a cosmographer; as though he particularly desired it to appear that his undertaking differed from all others of a similar nature, inasmuch as it had been resolved upon by purely theoretical considerations.

Therefore it is possible that the friends and relations of Columbus—we do not say Columbus himself—may have desired to answer the accusation, so detrimental to the glory of the great navigator, that he owed everything to an obscure and unlucky sailor, by inventing a correspondence which revealed him in the light of a rival to a renowned scholar instead of being merely the lucky recipient of the secret of an unknown man. But this hypothesis would be unacceptable were not the allegations against Columbus justified, in appearance at least, by actual facts. The fabrication of the Toscanelli correspondence supposes the truth of the adventure of the pilot who is credited with having instructed the discoverer. It is therefore advisable, before going further, to study the story of this pilot from its sources, and to see how far it is well founded. This we proceed to do.

III.—THE STORY OF THE PILOT, SO FAR AS WE KNOW IT.—The contemporary authors, whose evidence is hereafter considered, Oviedo,[111] Las Casas,[112] Gómara,[113] and Garcilaso

[111] Oviedo (1535)—*La História generál de las Indias*, Seville, 1535, Book I., chap. ii. and chap. iv., vol. I., p. 13 and p. 18 of the complete edition of Madrid, 1851-55, 4 vols. in large 4°.

Oviedo is the first who has printed the story of the pilot, but not the first who mentions it.

[112] Las Casas (1527)—*História*, etc., Madrid, 1875, 5 vols., Book I., chap. xiv., t. I., pp. 105 *et seq.*

This chapter is entirely devoted to the subject. Las Casas began his history at the latest in 1527, but he knew the story of the pilot long before, for he says it was at Hispaniola he heard it, just as he arrived there (p. 103), that is to say, in 1502. His document is the oldest and most important we have on this tradition (see later: examination of the sources). It has escaped the attention of nearly all the authors who have dealt with the subject. Washington Irving has even written that Las Casas has not mentioned it.

[113] Gómara (1553)—*História de las Indias*, chaps. xiii., xiv., and xv.

de la Vega,[114] recount the story of the pilot, who is said to have informed Columbus, in the following manner.[115]

This is the second account printed, and the first, if we except Las Casas, wherein the authenticity of the story is affirmed. Gómara has been supposed, on insufficient grounds, to have copied Oviedo. He is, it is true, a credulous and uncritical writer; but his evidence on this point is very valuable. See later: examination of the sources.

[114] Garcilaso de la Vega (1609)—*Primêra parte de los comentários Reales*, Lisbon, 1609, Book I., chap. iii. Garcilaso relates the story of the unknown pilot, whom he is the first to name, with details unmentioned by his predecessors. He assures us he heard it as a child from his father and his father's friends, who themselves had heard it from the first discoverers. Garcilaso, born in 1540, lost his father at the age of twenty. It would therefore be about 1550 or 1555, when he would be from ten to fifteen years of age, that he had heard these recitals. At that period some seventy years had elapsed since the event had taken place. But Garcilaso's father might well, as he says, have known the contemporaries and even the companions of Columbus. Garcilaso is the last who gives original information on this story.

[115] These four chroniclers are not the only ones who record this history. Several other authors, some even older than Garcilaso, have given it, but their accounts appear to be borrowed from Oviedo and Gómara, and contain only a few insignificant additions. In order of date they are:—

Benzoni (1565)—*La História del Mondo Nuovo*, Book I., chap. v.; French edition of 1579, pp. 32-40; English edition of the Hakluyt Society, London, 1857, pp. 14-16. He repeats Gómara's account, whom he accuses of wilful obscurity. He does not, moreover, quote him accurately.

Ferdinand Columbus (1571)—*Historie*, chap. ix., last paragraph.

This chapter is entirely borrowed from Las Casas, with the exception of the last paragraph, which has been added by some unknown hand, certainly not by that of Ferdinand Columbus, wherein it is said that the adventure related by Oviedo belongs to Vincente Díaz.

Garibay (E.), 1571—*Los XL. libros del compendio historiál de las chronicas y universal história de todos los reynos de España*, Antwerp, 1571, 4 vols. in fol., Book XVIII., chap. xxx., edition of 1628, vol. II., p. 650. He copies Gómara.

Acosta (José de), 1590—*Histôria natural y moral de las Indias*,

In 1483 or 1484,[116] a pilot, whose name and nationality are very doubtful, but who is supposed to have been a sailor from

Seville, Book I., chap. xix.—merely mentions the story, in which he believes.

Fructuoso (G.), 1590—*Saudades da Terra*, Book I., chap. xxii. Is the same as Gómara's account. This work is partly in manuscript. But Señor Azevedo has published the above-indicated passage as a note to his edition of that part of Fructuoso's *Saudades* devoted to the Portuguese islands, Funchal, 1873, in 8°, pp. 659-660.

Wytfliet (1598)—*Descriptiones Ptolemaicæ*, Louvain, 1598, pp. 3 and 4. He accepts the story without discussion.

Mariana (Father J.), 1601—*História generál de España*. . . . Toledo, 1601, Book XXVI., chap. iii. The Toledo edition is the first in which Book XXVI. appears. Mariana adds nothing to the accounts before known ; he also believes in the story.

Vasconcellos (Simoa de) 1603—*Chronica da companhia de Jesu do estado de Brasil*, Lisbon, 1603, Book I., Noticias, p. 28, 1865 edition.

García (Gregorio), 1607—*Orígen de los Indios*, Book I., chap. iv., sect. 1—believes the tradition.

Torquemada (1613)—*Monarquía Indiana*, second edition, Madrid, 1723, 3 vols. in 4°, Book XVIII., chap. i., vol. III., pp. 283-284. Copies Oviedo and Gómara. For other sources of information on the subject see Captain Duro's paper, quoted below.

[116] *Date.*—Las Casas, Oviedo, and Gómara give no date, but speak of the incident as if it had taken place not long before the discovery of the New World.

Fructuoso (1590) is the first to indicate a precise date, that of 1486, which cannot be adopted, for, according to the very terms of the legend, it was while Columbus was still in Portugal that he heard the story from the pilot (*Saudades da Terra*, p. 569). The Portuguese authors consulted by Ferdinand Denis for his article *Sánchez*, of the *Biographie générale*, say 1480 ; but all these are modern and can only hazard a guess on the point. Garcilaso alone gives a date which can be reconciled with what we know of the life of Columbus in Portugal. He says: "About 1484, it may be a year before or a year after" (*Comentários Reáles*, Book I., chap. iii., Markham's translation, vol. I., p. 20). In default of any other we accept this indication. If the story be true, it can only have taken place during the last years of Columbus' stay in Portugal.

Huelva, named Alonso Sánchez,[117] appears to have sailed

[117] *The Pilot's name.*—Neither Las Casas, nor Oviedo, nor any of the authors who relate this story before Garcilaso, *i.e.* before 1609, mentions the name of the pilot; Gómara, Acosta, and Fructuoso even assert that it is not known. All those who wrote after Garcilaso follow him by saying it was Alonso Sánchez. Father Ayres de Cazal, nevertheless, gives him the Christian name of Francisco (Corografía, vol. I., p. 2). As to his nationality, Garcilaso is also the first to assert that he was from Huelva, and was therefore an Andalucian. Oviedo, Gómara, and Fructuoso relate that some think he was an Andalucian, others a Portuguese or a Basque. Modern Portuguese writers are ready enough to claim him as a countryman, and make him out to have been a native of Cascaes in Portugal, but they give no evidence in support of their assertion. M. Eudes, who has searched the Portuguese archives for some trace of this person, has found nothing. The Basque origin of this pilot has also its supporters. Cleirac does not hesitate to say that "les Castillans ont pris à tâche de dérober les français de la première atteinte de l'isle athlantique qu'on nomme Indes occidentales," and that "le pilote, lequel porta la première nouvelle à Christophle Colomb et luy donna la connaissance et l'adresse de ce monde nouveau, fut un de nos basques terre-neufiers" (*Us es coustumes de la mer*, 1661, p. 152). Father G. de Henao also says that this pilot was a Biscayan, and that he made his confidences to Columbus at Madeira on returning from cod-fishing (*Averiguaciones de las antiguedades de Cantabria*, Salamanca, vol. I., 1689; Book I., chap. iv., pp. 25-30). Finally, in one of the pieces of the *Collection de manuscrits relatifs à la nouvelle France*, published at Quebec in 1883, there is mentioned a manuscript entitled "Description de la mer Oceane," which says that the New World was discovered by a French pilot of Saint-Jean-de-Luz, who was thrown by a violent storm on the American coast. Returning to Europe he "communiqua la route qu'il avait faite à Coulon chez lequel i lmourut" (*loc. cit.*, vol. I., No. III., p. 7). All that we are told of this manuscript is that it figured in the catalogue of one Alexis Monteil, printed at Paris in the Seventeenth Century. Let us add that, according to M. Ducéré, some think this pilot was Juan de La Cosa, a native of Santona, who accompanied Columbus on his first voyage (*Recherches historiques sur la pêche de la morue*, Pau, 1893, p. 29). The partisans for the Basque origin of this pilot appear, however, less convinced that the people of Huelva and Cascaes, who, a few years back, proposed to raise a statue to Sánchez in each of those towns.

from one of the ports of the Spanish peninsula[118] on a commercial voyage to England and Flanders.[119] His vessel was laden with such goods as were then shipped to those countries (Las Casas), and with provisions (Oviedo). His crew consisted of seventeen persons (Garcilaso). On reaching the open sea an easterly gale sprang up (Gómara), which drove the vessel out of her course. The gale continuing for twenty-eight or twenty-nine days (Garcilaso), the sailors were carried to a region unmarked on any chart (Gómara). It was the Antilles (Las Casas). They landed on one of them (Oviedo), Hispaniola (Las Casas),[120] and found that the natives went naked (Oviedo). The pilot took down exactly the bearings of the island, shipped water, as also wood (Oviedo), and again set sail.

On the homeward journey, which was long and painful, for much time was lost in searching for the course, and

[118] Las Casas says he sailed from one of the ports of Spain ; but in his time the term Spain extended to the whole Peninsula. Las Casas adds that he does not recall if the port were named, but he seems to think it was one of the ports of Portugal (*História*, vol. I., p. 103).

[119] Las Casas, vol. I., p. 103. Oviedo only mentions England as the destination (*loc. cit.*, vol. I., p. 13). Garcilaso and Gómara say that this pilot's caravel, according to some, ran between the Canaries and Madeira ; according to others, between Portugal and San Jorge da Mina on the Western Coast of Africa.

[120] Las Casas in the summary of his fourteenth chapter, which is entirely devoted to this history, and which was written at Hispaniola, says it was at that island (*esta isla*) the pilot landed. Further on (p. 104) he adds, "to these isles," meaning thereby the Antilles : finally, a few lines lower down, he relates that the Indians remembered white men who wore beards visiting Hispaniola before Columbus. For Las Casas, therefore, there existed no doubt as to its being Hispaniola that was discovered by the pilot. Oviedo and Gómara do not name the island. After Las Casas the first to say it was Hayti is Garcilaso, who does not appear to have known the manuscripts of Las Casas.

provisions became scarce (Garcilaso), the greater part of the crew fell sick and died. The survivors, numbering three, four, or five,[121] among whom was the pilot Sánchez—if that were his name—at last fetched Madeira,[122] where Columbus, who then dwelt on that island, gave them refuge. Worn out by the privations and labours of this journey, to which is assigned a duration of four or five months, perhaps more (Oviedo), they too soon died. But their secret did not die with them. The pilot who breathed his last in the house of Columbus, whose friend he is said to have been,[123] touched by the kindness he had received from him, gave his host, as a mark of his gratitude, all the observations he had taken as to the position of the island and the course to be steered in order to reach it, which observations had been carefully written down (Las Casas).

The critics have given no belief to this tale. It has

[121] Three or four according to Oviedo and Fructuoso; Garcilaso says five, and adds that the whole crew had consisted of seventeen persons (*loc. cit.*).

[122] The fact that Madeira was the point of arrival is stated in precise terms by Las Casas. Oviedo says opinions differ on this point: according to some it was Madeira, according to others it was the Cape de Verde islands that the pilot fetched on his return. Gómara mentions the Azores as being one of the places at which the pilot is reported to have landed, but he lets it be seen that in his opinion this extraordinary journey ended at Madeira (*História*, chap. xiv.). Fructuoso, Garibay, Mariana only name Madeira. Garcilaso gives quite a different version: according to him it was at Terceira that Sánchez landed on his return (*loc. cit.*, chap. iii.).

[123] The two oldest chroniclers of the legend, Las Casas and Oviedo, say the pilot was the friend of Columbus. Oviedo speaks of a map which it would seem the pilot had begged Columbus to make under his direction. Las Casas uses pretty much the same language (See vol. I., p. 106).

generally been supposed to have been inspired from a feeling of jealousy or ill-will against Columbus, and, somewhat without sufficient examination, it has been summarily rejected. This arbitrary judgement calls for revision, when it may appear it was formed without sufficient knowledge of the origin of the story, and has been based rather on sentimental grounds than critical considerations.

IV.—EXAMINATION OF THE SOURCES OF THE STORY.—Setting aside Captain Duro,[124] and perhaps one or two more,[125] all the writers whose opinion is of value in such matters, from Washington Irving,[126] the first and fullest historian of Columbus, down to Mr Harrisse,[127] the most

[124] Duro (Cesáreo Fernández), 1892—*La Tradición de Alonso Sánchez de Huelva descubridor de Tierras incógnitas* (*Boletin de la Real Academia de la História*, Madrid, 1892, tome xxi., pp. 33-55).

A serious critical study, which decides in favour of the authenticity of the legend. Captain Duro had already touched on this subject in his criticism of the work of Count Roselly de Lorgues on the posthumous history of Columbus (*Colón y la história póstuma*, etc., Madrid, 1885, pp. 65 *et seq.*), in *Nebulósa de Colón*, 1890, and in his *Pinzón*, 1892. M. Emile Travers has given an impartial and well executed study on this tradition based on Captain Duro's work: *Alonso Sánchez de Huelva et la tradition qui lui attribue la découverte du nouveau Monde*, Paris, A. Picard. Caen, H. Delesques, 1892, in 8°, p. 46.

[125] We may name the former President of the Geographical Society of Lisbon, Senhor Lucien Cordeiro (*La part des Portugais dans la découverte de l'Amérique*, Lisbon and Paris, 1876, in 8°, pp. 37-46), and the President of the Royal Geographical Society of London, Sir C. Markham, who does not find the story improbable. Note to his English edition of Garcilaso (Hakluyt Society), vol. I., pp. 24-26.

[126] Irving (Washington), 1828—*History of the Life and Voyages of Columbus*, London, 4 vols., in 8°, Appendix XI., Defauconpret's French edition, 1828, 4 vols., in 8°, Appendix.

[127] Harrisse (Henry), 1884—*Christophe Colomb*, vol. I., p. 106 and pp. 297-298.

competent of the Columbists, regard as baseless the story we have just narrated;[128] insomuch that those who believe it are chiefly writers whose want of study, whose childish methods of criticism, and frequently whose prejudice leave them without authority when pronouncing judgement in a case of this kind.[129]

Among all the contemporary accounts of this story that have come down to us there are four which, for different reasons, deserve to be considered. They are: Oviedo's, which was the first to be printed; Las Casas', which dates from the very time when the tale was first

[128] Among the most weighty we may cite: Robertson, *Hist. of America* (1777), note xvii. to vol. I. French edition (1828), vol. I., note 23. Humboldt (1836), *Examen critique*, vol. I., p. 225; vol. II., p. 155. Gaffarel, *Histoire de la découverte de l'Amérique*, 1892, vol. I., pp. 49-52. We will add: Juan Pérez de Gusman, *Precursores fabulosos de Colón: Alonso Sánchez de Huelva.* In *La Ilustración Española y Americana*, Madrid, 30th March 1492. He is one of the few Spaniards who reject the tradition.

[129] With but rare exceptions, nearly all the Spanish and Portuguese writers admit the authenticity of the legend. In addition to those already mentioned we can name: Couto (Don José Ferrer de), 1857, *Colón y Alonso Sánchez*, Madrid; Leal (Baldomero de Lorenzo y), 1892, *Cristóbal Colón y Alonso Sánchez ó el primer descubrimiénto del nuevo mundo*, Jerez, in 8°, pp. 38-310; Alderete (Bernardo de), 1614, *Várias antigüedades de España*, Antwerp, in 4°; Solorzano, 1629, *De Jure Indiarum*, etc., Book I., chap. v., Nos. 6 and 7, vol. I., p. 29, Lyons, 1672; Caro (Rodrigo), 1634, *Antigüedádes y principádo de la ilustríssima Ciudád de Sevilla*, Seville, Book III., chap. 76; Orellana (Pizarre y), 1639, *Varónes ilústres del nuevo mundo*, Madrid, chap. ii.; Ferreras (J. de), 1727, *História de España*, Madrid, t. VIII., p. 128, French edition, Paris, 1757; Cazal (Father Manuel Ayres de), 1817, *Corografía Brazilica* . . . Rio de Janeiro, 2 vols., Introduction, p. 2; Lima (Abreu de), 1839, *Synopsis o deduccão chronologica in Memória sobre as colonias de Portugal*, Paris, 2 vols., in 8°; Asensio (Joaquín Torres), 1892—Preface of the Spanish translation of P. Martyr's *Décades.*

mooted abroad; Gómara's, the first printed account wherein it is stated to be true, and Garcilaso de la Vega's, which completes the story with details unknown to his predecessors.

V.—OVIEDO.—Up to the present Oviedo's account has received most attention; it has been the fountain of inspiration for the greater number of authors who have told the story after him. It is the only account of which critics have asked, did it contain the elements of truth. When this chronicler gave it to the world in printed form it had already been current for at least twenty years, and Columbus had been dead more than ten years.[130] Very short though this period may be, the tale might already differ from the one first put into circulation, that is to say, soon after the first voyage of Columbus. If Oviedo had discussed its authenticity, if he had even only given some indication of its origin, of the persons who believed it, or the motives he himself had for calling it in question, we might have obtained some light from such information; but his recital, although fairly circumstantial, contains nothing of the kind. All we can gather from his account is that the tale had currency in his day, that every one did not tell it exactly in the same way, and that he himself did not believe it.

This last point has its importance. Oviedo was an exact, judicious, and extremely impartial chronicler, and

[130] From Las Casas we know that the birthplace of the legend of the unknown pilot was Hispaniola; but Oviedo did not go to the New World until 1514, and it was not until some years later that he fixed his abode in Hispaniola.

the fact that he rejected the story should, one would think, at first glance, suffice to settle the question of its authenticity. It is thus, in fact, that the greater number of writers have decided. Perhaps, however, they have not paid enough attention to his style of expression. After relating the facts, Oviedo concludes as follows:—"No one can affirm with certainty that things really occurred after this fashion; for my part I think the tale is false." However, he immediately adds the reason for his incredulity: "For, as says Saint Augustine, *it is better to doubt of things unseen than to wrangle over uncertain things.*"[131] Consequently, according to Oviedo, no one knew the truth of this story that was the gossip of the streets, and if he (Oviedo) did not pin his faith to it, it was neither because its falsehood was apparent, nor that he had cause to think it was fabricated, but for the simple reason that, ignorant as we are of the truth, it is better to hold asserted facts as false than needlessly to discuss them on insufficient grounds. Oviedo evidently agreed with the poet Gray:—

> "Where ignorance is bliss,
> 'Tis folly to be wise."

At any rate we cannot see here a categorical and downright denial. Elsewhere, by saying Columbus was urged on through his conviction that his grounds were sure, whether this conviction was due to the reported revelations made to him by a pilot, or whether it came to him through his own study,[132] Oviedo implicitly admits the story may

[131] "Para mi yo lo tengo por falso, é como diçe el Augustino: *Melius est dubitare de ocultis, quam litigare de incertis*" (*História generál* Book II., chap. ii., vol. I., p. 13).

[132] *Loc. cit.*, Book II., chap. iv., vol. I., p. 18, col. 2.

be true. Thus Oviedo in his day looked at the question as we do in ours: either Columbus had information or he worked on rational data.

VI.—LAS CASAS.—But even though Oviedo had expressed a categorical and well-reasoned doubt on the truthfulness of this history, his opinion could scarcely carry weight against that of a man who was infinitely better qualified to know the truth on this point. We refer to Las Casas. If indeed Oviedo be the first who has printed the story of the nameless pilot, and if it be true, as Mr Harrisse says, that most of those who repeat it borrow from him, while embellishing it with new found details, it is inaccurate to say that he was the first to gather up the tale. The first to take notice of it was Las Casas. Las Casas, who is wrongfully accused of being among those who have slavishly copied Oviedo almost word for word,[133] owes nothing on this point to the historiographer of the Indies. His account, though it records pretty nearly the same facts, differs from that of Oviedo in several details; he also obtained it under more favourable conditions as well as at an earlier period—indeed we can, very nearly, fix the date. It is an admitted fact that Hispaniola (Hayti)—the real theatre of the important events of the discovery and conquest[134] where several of the first discoverers dwelt: Ojeda, Morales, Matheos, Bastidas among others—was the real cradle of the story; it was there Las Casas heard it, and there too, in all probability, although he does not say so, Oviedo picked it up. Had he heard it

[133] Las Casas, Gómara, and Garibay repeat this legend, copying almost word for word Oviedo, who is clearly their only authority, says Mr Harrisse (*Ch. Colomb*, vol. I., p. 106).

[134] *Ibid.*, vol. I., p. 103.

elsewhere, far from giving weight to his version, it would have lessened its value. Now, Las Casas preceded Oviedo in Hispaniola by a dozen years: he first went there in 1502, and he informs us it was shortly after his arrival in the island that he heard the story of the pilot from the mouths of the very men who related it. Las Casas furthermore says that these tellers of the story were the men among whom he lived, the very companions of Columbus; the men who had sailed with Columbus on his first voyage, who had come with him to people the island, and who had helped him in his discoveries.[135]

Las Casas' version of the story of the unknown pilot is therefore the oldest that we have; it is even the oldest it is possible to have, for it dates from within a few years at most of the very period when it was first set afoot. On this ground his account is of far more value than Oviedo's; it also casts more light upon the affair. Las Casas, like Oviedo, bears witness to the fact that belief in the history was general; but he is far more affirmative and explicit on this point. While Oviedo declares his disbelief in the tale because proof of its authenticity is not forthcoming, Las Casas, contrary to what has been too lightly asserted, considers

[135] . . . "I wish to write here what was currently said, what was believed at this period, and what I then learned, when, in the early days, I found myself in these regions. It very frequently happened, in fact, among us all who then dwelt in this Spanish isle (this chapter appears to have been actually written in Hayti), not alone among those who made the first voyage with Don Christopher Columbus and who came with him to people the island, but also among those who arrived some time afterwards — that we discoursed among ourselves of the cause which determined the admiral to undertake the discovery of these Indies" (*História*, Book I., chap. xiv.; vol. I., p. 103).

it as perfectly established. True he, like Oviedo, expresses a doubt; but we shall see that this doubt in no way bears on the reality of the adventure.

It is after explaining the different causes, which, according to him, were instrumental in forming the conviction of Columbus and led him to venture on his great enterprise, that Las Casas comes to the story of the unknown pilot, a story which in his time, he explains, was given out as the determining cause (*la causa mas eficáz*) of Columbus' vocation. It is on this point, and on this alone, that Las Casas expresses some doubt. For him, Columbus was guided by the hand of God, Who caused to happen such circumstances as should lead him to the end He had traced out for him. The unknown pilot's adventure may have been one of the means chosen by God to work on Columbus; but was it, as every one said and believed, the decisive event which finally convinced Columbus? Las Casas says he will not affirm that it was, and he explains why: it is because the means chosen by God to lead Columbus whither He wished he should go are so numerous and effective that it little matters whether this one were or were not of the number.[136]

[136] We give a translation of the whole passage: "To end with this question of the motives which settled Columbus to propose the discovery of these Indies, we are going to record the common belief, in times passed, after which it is admitted that the most determining cause of his resolution (to undertake the discovery of the Indies), (*la causa mas eficáz de su finál determinación*), is the one we are going to lay bare in this chapter. I do not affirm that it was so (*la cual* (causa) *yo no afirmo*), for in very truth the reasons and circumstances which God suggested to Columbus for this end are so numerous and of such a nature that only a small number, all for a greater reason, were enough and more than enough to decide him to carry out his scheme" (*História*, Book I., chap. xiv.; vol. I., p. 103).

Thus it is not upon the authenticity of the history of the pilot that Las Casas refuses to give an affirmative opinion; he hesitates to believe, what so many persons alleged, that it was the information given by the pilot which decided Columbus.[137] As to the history itself, Las Casas so little doubts it that he does not hesitate to say it comes from persons who knew it well, perhaps even from Columbus himself;[138] and, as has been already mentioned, he remarks in support of its authenticity that the Indians of Cuba asserted that white and bearded men had visited their isle before those who accompanied Columbus.[139] Finally, Las Casas closes the chapter, exclusively devoted to this matter, by saying that, whatever may have been the motive which convinced Columbus, he was as certain of discovering what he discovered, of finding what he found, as though he had it locked in his own chamber with his own key.[140]

[137] If any further doubt existed as to this being Las Casas' meaning, the passage which follows, wherein, three pages on, he repeats, while accentuating, what he has already said, would make such doubt disappear: "Here is what was currently said in the island among us, and what was reckoned as certain, as I have already stated, and it was looked upon as a matter on which there was no doubt (*como a cosa no dudósa*) that it was this which had decided Columbus" (*loc. cit.*, p. 106). But, adds Las Casas, one may or may not believe this, because, in truth, as has been already said, there were so many examples, evidence, and natural reasons for surely guiding Columbus that it amply sufficed (*ibid.*).

[138] . . . ó por ventura quien de la boca del mismo almirante ó en todo ó en parte, ó por alguna palabra se lo oyere (*História*, Book I., chap. xiv.; vol. I., p. 104).

[139] *Ibid.*

[140] Esto, al ménos, me parece que sin alguna duda podemos creer: que ó por esta ocasión, ó por las otras, ó por parte dellas, ó por todas juntas, cuando él se determino, tan cierto iba de descubrir lo que descubrio y hallar lo que halló, como si dentro de una cámara, con su propia

Las Casas' declarations and the details he gives in this chapter, which so many critics have handled without seeing their real drift, settle the question of the genuineness of the alleged voyage of the unknown pilot who is said to have instructed Columbus. After carefully weighing the terms in which Las Casas tells the story, it is difficult —nay impossible—to believe it has no other foundation than envy and jealousy. It is true Columbus had adversaries, enemies whom his haughty character greatly incensed; he was a foreigner, without family ties in Spain, and among the Castilians, who were witnesses and perhaps helpers to his success, there were certainly some who thought themselves more able than this Genoese, and who were vexed at his sudden rise to lofty fortune. In such a frame of mind it is not surprising that complaints and envious comments should be set afloat with the object of lessening the personal share Columbus had in his discovery. It is therefore possible that at Hayti—which at this time was a very hot-bed of intrigues—facts were mentioned and passed from mouth to mouth, being distorted in the process, which originally were of no importance, but to which slander succeeded in giving a complexion unfavourable to the great discoverer. But Las Casas, who was a sincere admirer of Columbus, could not be either the dupe or the accomplice of such tale-mongering; and if he believed the history, as there is every reason to suppose he did, it is not easy to perceive what motives should make us more sceptical.

llave, lo tuviera (*loc. cit.*, p. 106). This is not the only time Las Casas expresses this idea; he returns to it when speaking of the map which he thinks is Toscanelli's. (See vol. I., pp. 96, 316, and 631.)

VII.—GÓMARA.—Gómara's account of the pilot's story is the most discredited of the four. This chronicler, who is very credulous and generally lacks judgement, has recorded the story in very nearly the same words as Oviedo, and, without adducing any fresh proof, he endeavours to show that the real discoverer of America was this unlucky pilot whose very name has escaped posterity.[141] According to him it is not true that Columbus was a man learned in Latin and cosmography, or that he was well read

[141] *Extract from Gómara.*—This passage from Gómara is somewhat curious; it comes after his account of the history of the pilot: "Thus it was Christopher Columbus had knowledge of the Indies. And in order that I may forget nothing, some have wished to say that Columbus knew the Latin tongue and that he was well learned in cosmography, which science incited him to search for the country of the Antipodes, and the rich Cipanga, noted by Marco Polo, through having read Plato in his *Timæus* and in his *Critias*, where he speaks of a very large island called Atlantea, and of a wooded country larger than Asia and Africa. And also through having read Aristotle or Theophrastus, who tells how certain Carthaginian merchants, sailing from the Straits of Gibraltar towards the setting sun and south, discovered, after lengthy voyages, a large unpeopled island nevertheless well furnished with navigable rivers. But quitting these authors, I say that Christopher Columbus was not learned but was only of good judgement, and that acquiring knowledge of these new countries, by the report of this dead pilot, he made enquiries from learned persons as to what the ancients said of other countries and of other worlds: among others he much communicated with a Brother Juan Pérez de Marchena, who lived at the monastery of La Rabida: by such communications he thought for sure that which the pilot had left him by mouth or by writing. It seems to me, had Columbus known by his own learning where were the Indies, long before, without coming to Spain, he would have treated this affair with the Genoese, who then overran the world; but he never believed about it, until that he met with this Spanish pilot, whom he found by the risks of the sea and by the Divine Will" (*Hist. de las Indias*, 1552, chap. xiv.).

in the authors who have spoken of islands and lands to the west. He was simply a man of sound judgement, who, becoming acquainted with the discovery of this pilot, took advice from those more learned than himself, especially from Father Juan Pérez de Marchena among others, whom he met at the Monastery of La Rabida, and thus acquired the conviction that what the pilot had reported was true. It seems to me, adds Gómara, that if Columbus by his own learning had arrived at a knowledge of the situation of the Indies, he would have treated with the Genoese, who then overran the world, for their discovery; whereas it was only after meeting with the Spanish pilot that his conviction was formed on this matter.[142] Thus, according to Gómara, it was indeed at Madeira or in Portugal that Columbus met our pilot, but it was only after his return to Spain and his conferences with Father de Marchena that he was aware of the value of the information he had received, and thought of utilising it. Serious objections may be raised to this portion of Gómara's version, and it is not difficult to understand, coming from so unsafe a writer, that such statements should have put critics on their guard. It has therefore been held, and not without some reason, that this chronicler, who is often flighty and partial, has merely copied Oviedo's account, adding thereto a compliment suggested by that very narrow-minded patriotism of which Columbus was long the victim, and which may be found, even to this day, among some Spanish authors.

It is, however, necessary to distinguish between the tradition that was afloat respecting this adventure and

[142] Gómara : *História*, chap. xiv.

what Gómara may have added to it. As regards the tradition, Las Casas has related it exactly in the same manner.

If it be true, as the Bishop of Chiapas affirms, that even the companions of Columbus, those who were in a position to be well-informed—his own remark — often told this story, and if they did not hesitate to say it was the revelations of the said pilot that decided Columbus, one cannot well see why Gómara also might not have heard this tradition from those who related it. It is true he did not live, as Las Casas and Oviedo had lived, among the first discoverers; but, although he was not born until 1510, he may have known many of them. A sufficiently lengthy list could be made of Columbus' own companions who lived long enough to have enabled Gómara to consult them.[143] At any rate, he lived in their centre, surrounded by people who must have been equally well acquainted with the tale of the nameless pilot. These were very favourable conditions, such as historians do not always find, for arriving at a well-balanced decision on the facts to

[143] We may cite among others: *Gonzalo Martín*, who formed part of the second voyage of Columbus, and who was still alive in 1535; *Hernan Pérez Mateos*, who accompanied Columbus on his first two voyages, and who was not dead in 1536; *Francisco Niño*, Columbus' pilot on his second voyage, and the son of another pilot of the discoverer; *Niño* was living in 1557; *Arias Pérez Pinzón*, and his brother *Juan Martín*, of the great Pinzón family; they were only about thirty or thirty-five years old when Columbus died; *Diego Martín*, Columbus' pilot on his third voyage, and who long survived him. See, for a further list of pilots and cosmographers who lived for many years after Columbus, the most valuable *Biographical Notes* Mr Harrisse has added to his great work, *The Discovery of North America*, 1892.

be considered; and it would be strange should Gómara, who proposed writing the book he wrote and in which he attributes great importance to this story, have found it necessary to borrow it from Oviedo when he was able to hear it from many men who were in a position to be thoroughly well posted in all its details. It may therefore be admitted that Gómara has only repeated what was said around him, what Las Casas himself avers was currently reported in his own day. The only real difference between the two accounts is that Gómara shares the view of those who assured Las Casas it was the information given by the pilot that decided the vocation of Columbus, while the good Bishop, without denying this fact, refrains from confirming it.

The same cannot be said for Gómara's assertion that it was only on reaching Spain, and after his conferences at La Rabida, Columbus understood the importance of the information the pilot had given him. Neither Las Casas nor Oviedo makes any allusion to the period when Columbus, according to the tradition, took his final decision, and it is possible, even probable, that those who related the story said or believed this took place in Spain, for at this period absolutely nothing was known of Columbus' life in Portugal. At any rate Gómara, whose authority is not very great, stands alone in mentioning this circumstance, which cannot be reconciled with a fact appearing to be perfectly well established: the proposals Columbus made to Portugal before proceeding to Spain and visiting La Rabida, where he does not appear to have been before 1491. If it were only after leaving Lisbon that his conviction was definitely formed, what was it he proposed to

King Joao II? If it were only in 1491 that he first visited La Rabida, what was it he was previously soliciting from the Catholic kings? There exists here a difficulty which obliges us to set apart this portion of Gómara's version: the remainder of his account seems to have the same origin and the same value as Las Casas'.[144]

VIII.—GARCILASO.—In a minor degree the preceding remarks may also be applied to Garcilaso's account. It is true this version was not published until 1609, but Garcilaso explains that he received it from his father, who, in turn, obtained it directly from the contemporaries and companions of Columbus. There is nothing unlikely in this. A story told at the period by so many persons may have reached the ears of the father of the Inca just as easily as it reached Las Casas, Oviedo, and Gómara. If anything threatens to put in question the exactness of Garcilaso's account it is the precision of his details. Contrary to the logical order of events, this version, which is the latest, and is consequently furthest removed from

[144] Another point should be noticed here wherein Gómara appears to be in error. To the religious with whom Columbus conferred at the Monastery of La Rabida he gives the name of Juan Pérez de Marchena, which, it is thought, belongs to two different persons: Brother Juan Pérez and Father António de Marchena. The confusion here attributed to Gómara, and which many others have committed, is not, however, perfectly established. See the discussion on this point by Mr Harrisse, who believes in the confusion (*Christ. Colomb*, vol. I., pp. 364-370), and, on the opposite side, M. Germont de Lavigne's article, *Christophe Colomb à la baie d'Huelva* (*Revue Bleue*, 10th September 1892). It should be remarked, on this same subject, that Gómara is the first to say Columbus went to La Rabida on leaving Portugal, and that Las Casas, whose work was then unpublished, confirms this assertion, which later on the *Historie* repeated.

the original sources, is also the most circumstantial. Garcilaso knew in 1609 what Oviedo and Gómara ignored eighty and fifty years earlier: he knew the name and the nationality of the pilot, as well as several details of the voyage unknown to his forerunners. This minute recording of incidents looks suspicious, and it is permissible to inquire whether Garcilaso, who was gifted with a vivid imagination, has not succumbed to the temptation of embellishing his tale by adding thereto some fanciful touches? An affirmative answer may be given to this question without destroying the credit of the foundation of the story. The name and nationality of the pilot are of small account; the essential point is to know certainly whether any pilot, whoever he may have been, thinking he had discovered a new island to the west, communicated the fact to Columbus, who drew his profit from the information. On this point the evidence of Garcilaso accords with the evidence of the others, and there is this to observe about what he says, that, like Las Casas, he does not think he injures the great Genoese by relating these facts. With the reservation we have indicated, the Inca's account may be placed with the other three, and may in great measure be reckoned as authentic.

IX.—FERDINAND COLUMBUS.—In the book which passes as the work of Columbus' son is also to be found a short allusion to the story of the pilot; we read therein that the foundation of this tale lies in the adventure of Vincente Díaz.[145] The story of this Díaz would seem to

[145] "Gonzalo de Oviedo writes, in his History of the Indies, that the admiral had a letter (*una lettera*) in which the Indies were

have no connection with that of our pilot, and the explanation given in the *Historie* would be valueless were it not supposed to come from the son of Columbus himself; but precisely on this point there is ground for expressing a doubt. Chapter xiii. of Las Casas, wherein he relates the history of all the pilots whose sea adventures had been jotted down by Columbus, corresponds word for word with chapter ix. of the *Historie*, which, however, has the addition of the few lines giving the above explanation. It is therefore clear that one of these chapters has been copied from the other; and were we to accept the common belief, that all those parts of Las Casas' book which are also to be found in the *Historie* were borrowed by him from the unknown Spanish text of this latter work, he would himself be the copyist. The theory which makes Las Casas, a writer who is most punctilious in indicating the sources of his information, the plagiarist of a book which no one ever saw will not, in our opinion, stand the test of a careful comparison of the text of the *História* with that of the *Historie;* but, even admitting that this hypothetical Spanish version of the *Historie* ever existed, it was certainly not from that Las Casas copied his thirteenth chapter, since he declares he borrowed it from the notes of Columbus himself.[146] Chapter ix. of the *Historie*

described by some one who had discovered them before. The matter did not happen thus nor otherwise, but in the following manner: 'Vincent Díaz, a Portuguese of Tavira, returning from Guinea to the Tercera islands, and having passed the island of Madeira, which he left east of him, saw, or imagined he saw, an island, which he certainly concluded to be land'" (*Historie*, chap. ix.).

[146] "En sus libros de memórias" (*História*, Book I., chap. xiii., vol. I., p. 101).

is therefore not from the pen of Columbus' son; it has been entirely copied from Las Casas by the authors of that compilation, who have added the few lines above-mentioned, but who equally refrained from copying the next chapter, wherein Las Casas recounts the adventure of the nameless pilot. This observation destroys all the bearing of the explanation given by the *Historie*.

X.—THE STORY OF THE PILOT IS PROBABLY TRUE.—To resume: the testimony of Las Casas alone, testimony obtained under the conditions we have indicated, and reported by the man who constituted himself at once the historian and the panegyrist of Columbus, suffices to demand belief for the adventure he is the first to relate to us. Even though the subsequent relations we possess of the incident were indeed copied one from another, which is in itself improbable, this would not suffice to make us believe that the foundation of the story was apocryphal. It may even be that in expressing this opinion we do not go far enough. In truth, the genuineness of the history of the pilot without a name is as well established as that of many others which no one doubts. We have already called attention, when speaking of Toscanelli's letter to Martins, to the fact that the criterion of certainty, when applied to historical events, varies in a remarkable manner and with no apparent reason. Thus everybody believes in the authenticity of this letter, the original of which has been seen by no man, and the existence of which rests solely on the evidence of Las Casas,[147] who himself only

[147] Ferdinand Columbus bears the same witness as Las Casas; it is known, however, that these two witnesses are in fact but one, for

knew on the subject what he found among the papers of Columbus; whereas all the world doubts the story of the unknown pilot, although its genuineness is attested by the very companions of Columbus!

There would therefore appear to be no justifiable reason for setting aside as apocryphal the fact that a pilot, whose name remains unknown or uncertain, had discovered, or thought he had discovered, an island or new country, the position of which he had indicated to Columbus. A distinction must, however, be drawn between the reality of the fact and the reality of the discovery, which may have been wholly fanciful. As was the case with so many more whose accounts Columbus collected, this pilot may have thought he saw an island or land known to no one before, whereas he may have all along been the victim of an illusion.[148] Still we have seen that Las Casas believed in this discovery, and, unless we completely reject his account, we must admit that Columbus also believed it. Besides, in itself, the adventure was not impossible, and it would even be surprising at the period in question, when all thoughts were turned to new discoveries and so many sailors were engaged

undoubtedly one of the two has copied the other. In general opinion it is Las Casas who has copied Ferdinand Columbus; in ours it is the compilers of the book, published under the name of the son of Columbus, who have copied Las Casas. Nor do we ignore that Columbus is supposed to have copied with his own hand the letter to Martins, which might be taken as evidence of its authenticity; but this autograph was only discovered in 1871, and even before that the letter was thought authentic.

[148] During the first voyage of Columbus, Martin Pinzón, Columbus himself, and all the crew, for twenty-four hours—from the 25th to the 26th September—thought they had land in sight. It was but a sky reflection.

therein, if some among them were not carried, accidentally or otherwise, either to one of the Antilles or Newfoundland, or even to the Continent itself, as indeed happened later to Cabral. The fact may well have occurred, even though it left no trace behind.

XI.—THE COUNCIL OF THE INDIES KNEW THE STORY OF THE PILOT.—Thus there were certain facts the knowledge of which might damage Columbus; so it was to his interest to deny them if they were false and to stifle them if they were true: for the situation remained the same for him whether the story of the nameless pilot were true or false. Let the tale be authentic or not, the fact that it was current from mouth to mouth did him harm, and in either case his interest lay in its not being believed. We must, however, remark that the mischief this tale could do to Columbus himself was chiefly of a moral character; it struck at his self-respect. His own glory and renown required that the chief merit of his discovery should not be attributed to another. This was the only point where this ungrateful story touched him personally. The case was far different with his heirs and successors, in whom the Crown was disinclined to recognise a right to the privileges, honours, and profits wherewith it had repaid the services of the great Genoese. They had a real and material interest in not allowing credence to such a story as the one told about the pilot in question, a story in which the crafty King Ferdinand and those who envied Columbus might find, and did in fact find, grounds, not indeed for contesting the importance of the discovery, but the importance at least of the part he had played therein.

A few retrospective words of explanation are here required. Columbus, when negotiating with the Catholic kings, had driven a hard bargain. He had acted as though he were absolutely sure of making his discovery, and, as a reward, he insisted on an exorbitant price: a title of nobility, the tenth part of every kind of revenue accruing from the discovered lands, the rank of Admiral with all its attendant privileges, and, lastly, the Viceroyalty for himself and his direct heirs of all the territories, islands, and continents he might discover.[149] The extravagance of these demands, to which one could only accede by making of Columbus, should he succeed, the second personage of the kingdom, almost indeed the equal of the monarch, frightened, or rather scandalised, the Court, and it wanted but little that all negotiations should be broken off. Nevertheless, it was the Crown that yielded, but it may well be believed that, in accepting the terms imposed upon it, neither the Court nor Columbus himself foresaw either the importance of the discovery of 1492, or the vastness of the engagements to which Spain was pledged. So far as Ferdinand was himself concerned, there is reason to believe he yielded to the exacting terms of Columbus only because he had no faith in his success.

[149] The agreement between the Catholic kings and Columbus was signed at Granada on the 17th and 30th April 1492 (Navarrete, vol. II., Nos. 5-6). On the return of Columbus, Ferdinand and Isabella, by a deed signed at Barcelona the 28th May 1493 (Navarrete, vol. II., No. 41), confirmed and amplified all the privileges and honours previously accorded to him and his heirs. The Granada deed was conditional; the titles and benefits granted to Columbus were not to take effect unless he succeeded: the Barcelona deed was absolute; the stipulations recorded in the first deed became operative from that day and for ever.

Spain therefore sought as soon as she could to get rid of her bargain. This she did not do immediately after the discovery, for its true character was not then revealed; indeed, the marvellous extent of the work Columbus had done was unknown until the conquest of Cortes. Columbus himself never knew what he had discovered. We should greatly err were we to suppose that the man who revealed the New World died in possession of the great renown time has brought to him. The glory of Columbus is purely posthumous. The last years of his life were spent in obscurity, and we may say that he expired amid the indifference of Spain and of that world whose extent he had doubled. Only one chronicler took the trouble to record the date of his death; and of those, few enough in number, who even mention his name in the fifty years following his death, not one, beyond his own two authorised biographers, his son Ferdinand and Las Casas, seems to have beheld in him a superior man, whose discoveries placed him head and shoulders above the other navigators and conquistadores of his time. It may be said that Gómara, in spite of his levity and absence of critical power, has exactly expressed the opinion then in vogue about Columbus, when he says, he was a man devoid of education but endowed with sound judgement, which enabled him to take advice from those who were instructed. If such, then, was the general feeling, and the silence that long fell over the name of Columbus is an indication of this sentiment which cannot be mistaken, it is probable the Court took the same view. The bearing of the Catholic king towards the discoverer, during the last years of his life, and afterwards towards his heirs, affords undoubted proof of this. Did, then, the knowledge

of the story of the anonymous pilot contribute towards forming this opinion? We cannot but think so, for both Las Casas and Gómara agree in saying that the story was widely spread. Nor can it be doubted that it was also known to the Catholic kings, to King Ferdinand at least, for, though not directly mentioned, frequent allusion is made to it in the lawsuit Diego Colón instituted against the Crown in defence of his rights, and particularly for his title of Viceroy, which the Crown refused to recognise.[150]

In the light of these considerations it is possible to understand Spain's resistance to the pretentions of Columbus and his heirs without seeking an explanation of her attitude in a feeling of base ingratitude and petty jealousy, as has too often been the case. If truly Columbus were merely the lucky beneficiary of another's discovery; if the result he obtained—no matter how great it might be—were not the fruit of his own ideas, were not the outcome of his own studies developed and perfected by his personal observations and reflections, but were simply the consequence of positive information which would have led any other man to the same goal; if, in short, the rôle he played was confined to the faith he placed in the confidences made to him, and to

[150] In the inquiry instituted in 1513 and 1515 on the demand of Diego, the king's Attorney-General argued that Columbus had only discovered what was already known, and that his undertaking had been suggested to him. The story of the unknown pilot is not mentioned, but from the questions asked one can see that, in the opinion of the representatives of the royal authority, Martin Pinzón had played a considerable part in the 1492 voyage, and that he had been as well informed as Columbus respecting the direction it was necessary to steer the caravels in order to find land. See Navarrete, *Col. Viages*, vol. III., No. lxix., the *Probanzas del Fiscal* (the Attorney-General's Proofs), and particularly question ii. and those following.

the energy displayed in hastening to the end that had been pointed out; then Spain might well believe she was not bound to recognise such services by perpetuating exorbitant privileges which lessened the royal authority, and far exceeded, not indeed the fruits obtained, but the personal merit they rewarded.

In any case, it was not pleasant for Columbus to have it believed that his discovery had been rendered easy by his having been made the recipient of another man's confidence; and, moreover, it might become prejudicial to him and his heirs should the Crown, in its present attitude, give ear to such rumours. It is therefore quite true to say that, though Columbus had primarily a moral interest in suppressing the belief that he had merely gone whither he was instructed to go, his direct descendants, heirs not only of his name and glory, but also of the grants and honours the Crown now seemed disposed to withhold, had far stronger reasons for seeking to hush up a fact which could only be hurtful to them.

CHAPTER VI

POSSIBLE AUTHORS AND PROBABLE AUTHOR OF THE FRAUD.

I.—THE LETTERS OF TOSCANELLI COME FROM LAS CASAS ALONE; THE *HISTORIE* GIVE THEM FROM HIM.—We know the probable motives for inventing the correspondence of Toscanelli with Columbus, or, to speak more accurately, we know of reasons which suffice to explain this deceit, if such existed; let us now see if we cannot discover some indication as to its author or authors. Before entering upon this search, we may recall, in order to emphasize still more what has been previously said: that the very existence of the correspondence with which we are engaged rests solely on the testimony of Las Casas and of Ferdinand Columbus, of whom one, as has been shown, repeats the other.[151]

In fact there is no doubt that the *História* of Las Casas and the *Historie* duplicate one another on a number of points, and that, especially on what concerns Toscanelli, the same assertions are to be found in the two works. As we have said, it is the general opinion of the critics that all that is to be found in the *Historie*, and that equally appears in

[151] See above, chap. ii., sect. 1.

the *História* of Las Casas, has been copied by him from the original memoirs of Ferdinand Columbus. Our point of view, which is based on a careful comparison of the two texts, is that Las Casas has only taken from these memoirs the pages he himself cites as coming from that source. As regards all the other passages which are identical in the two works, it is evidently the Italian text which has been translated from that of Las Casas, whose text cannot come from the manuscripts of Ferdinand Columbus, because, among other reasons, it contains a multitude of errors which may be pardonable in the Bishop of Chiapas, but would be inexcusable and quite impossible in a son of Columbus.

Without further labouring this point, it is enough, for our object, to remark that what Las Casas relates about Toscanelli is not among the subjects he admits having borrowed from Ferdinand Columbus; in fact, he really declares the contrary by stating that there was brought or remitted to him, along with other documents written by the Admiral's own hand, the letter to Martins in a Spanish translation, and the map which had accompanied the letter,[152] language he would not have used had he found these documents in the manuscript history of the discoverer by his son, a work he possessed, and from which he frequently quotes. It was therefore clearly Las Casas who first stated Toscanelli had

[152] Which letter—the one to Martins—says Las Casas, I have had in my possession, translated from the Latin into Spanish (*Vuelta de latin en romance*, *História*, vol. I., p. 92). See also in the same volume, pp. 278-279, where, speaking of Toscanelli's map, he thus expresses himself: "I have it in my possession, with other things of the Admiral himself who discovered these Indies, as well as writings in his own hand, which have been confided to me: *y escrituras de su misma mano que trajeron à mi poder.*"

corresponded with Fernam Martins, as also with Columbus. But, as he stands absolutely alone in giving this information, the source of which he only vaguely indicates; and since (he tells us so himself) he had never seen the Latin text which was the original of the letters he has reproduced from a Spanish translation, whose history he either cannot or will not give, we are driven to declare that this unsupported statement in no way affects the many reasons which prove the improbability—not to say impossibility—of Toscanelli having ever corresponded with either Martins or Columbus.

II.—PAPERS AND DOCUMENTS IN LAS CASAS' POSSESSION.—It being a well-established fact that the existence of these letters from Toscanelli rests solely on the bare evidence of Las Casas, and, furthermore, there being good reason to believe they are apocryphal, it would seem possible, could we trace the history of these documents alleging that Toscanelli had been consulted by King Alfonso and Columbus as to the road to the Indies, to point out, if not definitely at least with some plausibility, the person responsible for the fraud. How came Las Casas into possession of this strange correspondence, which ought to have held as important a place in the history of the maritime exploits of the Portuguese as in the life of Columbus, and which was unknown to so many persons well placed to be acquainted with it: a correspondence Columbus himself never seems to have known Las Casas appearing to be the sole person to whom it was ever revealed?

We have just seen that the Bishop of Chiapas does

not clearly explain himself on this point, and that he produces Toscanelli's letters without precisely indicating whence they came; but he does allow it to be seen that they reached him from some one of Columbus' family. There can therefore be no room for doubting that Las Casas' source of information as to the relations of Columbus with Toscanelli was the great navigator's family papers which had been confided to his care, and it was from them he took the Spanish translation of the letters he has inserted in his history.

But this decision does not inform us of the real origin of these letters, for Las Casas possessed a large number of documents appertaining to the family of Columbus, all of which did not come from the same quarter. In addition to a great part of the discoverer's correspondence, which he frequently quotes from the original manuscripts, Las Casas possessed the log-book of the first voyage as well as the log-book of the third; he had Bartholomew Columbus' papers, which appear to have been of considerable importance; Ferdinand Columbus' manuscripts from which he cites extracts, and a heap of documents of a confidential and official character,[153] his possession of which it is hard to explain, but from which he largely drew for the compilation of his book.

III.—THE SOURCE OF LAS CASAS' DOCUMENTS.—Whence came these precious documents? Who could have

[153] See, for fuller information on the family papers of Columbus and the other authorities used by Las Casas, the very interesting chapter Mr Harrisse has devoted to this subject in his *Christophe Colomb*, vol. I., pp. 122 *et seq.*

confided them to Las Casas? He does not tell us; we shall, however, try to make up for his reticence.

Las Casas returned from America in 1539, and was consecrated Bishop at Seville in 1544; shortly afterwards he went again to the New World and did not finally come back to Spain until 1547, when he settled down at Valladolid, in the Monastery of San Gregorio, where he spent the rest of his days; it is there we may suppose he revised those portions of his book already written, and completed the remainder.[154] At that period, and for a good while before, the most valuable of Columbus' papers were locked in an iron safe confided to the care of the religious of the Convent of Las Cuevas, near Seville, who watched over their charges most scrupulously, and, if Las Casas obtained access to them, it was not in all probability with their assistance.[155] Perhaps, moreover,

[154] Las Casas says he began his *History* in 1527; but from various passages of the text it can be seen he was still working on it in 1552 and 1561. The earlier of these dates is even mentioned in the first pages of the work. It is quite evident that Las Casas, like Oviedo, kept revising his book to the last moment; but there is no doubt it was after 1547 that he wrote and gave the final touch to a great part of it. See the chapter of Mr Harrisse's *Christophe Colomb*, cited in the preceding note.

[155] *The Papers of Columbus.*—It is not exactly known when Columbus entrusted his papers to these religious, who were also the guardians of Bartholomew's documents. Bartholomew withdrew his in 1508; Columbus' papers remained at this Convent until 1609, at which date they passed into the hands of Nuño de Portugal, then recognised as heir to the Admiral's estates and titles. But it is clear that Columbus' direct heirs, first Diego I and subsequently Don Luís, had full access to them, for their rights were undisputed. So far as the latter is concerned this is beyond question, for, from an authentic document, we find that in 1566 the papers of the Columbus family were placed in the Santa Ana Chapel

these papers were not indispensable to him; for they must have been chiefly composed of grants and concessions to Columbus, duplicates of which, duly authenticated, existed elsewhere. It was not so with respect to the other papers of Columbus; his correspondence, his logs, the map he had used on his first voyage, and all his works in manuscript; these had naturally passed into the hands of his eldest son, Diego, the heir to his titles and estates, who was also the second Admiral of the Indies. On Diego's death, in 1526, these titles and possessions passed to his son and heir, Don Luís Colón, who was subsequently third Admiral of the Indies, and became first Duke of Veragua, but who was at the time of his father's death a minor under the guardianship of his mother, Doña María de Toledo. Although we possess no documentary evidence to this effect, there is little doubt it was in her hands that most of her husband's papers, as also those of Columbus, remained, for she alone, during her son's minority, had a right to their custody. Nevertheless it is possible that some of these papers had already passed, or may then have passed, into the hands of Ferdinand Columbus, second son of Columbus, and Diego's brother, who was the scholar of the family, of which in a manner he was also the archivist, and who proposed writing his father's life —which, indeed, he accomplished, at least in part—and who always displayed a scrupulous care and even jealousy for his collections of documents. Ferdinand Columbus died in 1539, bequeathing all his collections to his nephew, this

of the Convent of Las Cuevas, which chapel, says the document, belonged to Don Luís Colón (*Memoriál del Pleyto*, No. 1014, *apud* Harrisse: *C. Colomb*, vol. II., p. 256).

same Don Luís, who thus became owner of all the deeds, papers, books, and manuscripts that had belonged to his grandfather, father, and uncle. The bequest of Ferdinand Columbus was, it is true, subject to certain conditions, the non-observance of which led to the ultimate transfer of the entire collection to the Cathedral of Seville; but this did not occur until 1552. Until that date María de Toledo, first, and after her death her son remained in sole possession of Ferdinand's collections, which María removed in 1544 from the dead man's house, in order to deposit them in the Convent of the Dominican Friars of San Pablo at Seville. Soon afterwards María de Toledo returned to Hispaniola, the seat of her vice-royalty of the Indies, where she had left her son, and where she died on the 11th May 1549, without having again revisited Spain. But shortly afterwards Don Luís came to Spain, and for at least two years he was free to do what he liked with all the family papers he had inherited.

Las Casas, who, like Don Luís and Doña María de Toledo, had lived in Hispaniola, and who had accompanied María on her journey to that island, definitely returned from the New World, as we have said, in 1547, in order to put the last touch to his book in Spain. It is probable he brought back with him those papers of Columbus and of Diego which may have remained in Hispaniola, and which María de Toledo probably hastened to place at his disposal, since he was writing a book in which the history of her family occupied a great place, and she had every reason to render his task easy, while gaining at the same time his sympathy. It is also very likely that she furnished him with authority to have access to the Colombina

collection which the Dominicans of San Pablo were keeping in trust for her son.

Perhaps Las Casas, who was himself a Dominican and a Bishop, did not need authority in order to make use of documents placed on deposit in a Convent of his Order. At any rate, he was not able to consult them there before 1547, for it was only on the 7th April 1544 that María de Toledo had deposited them in that Convent, and Las Casas, who had been consecrated there only a few days before, left shortly afterwards—on the 4th July—for the New World, whence he did not return until 1547. Las Casas could not therefore have had access to the Colombina without the authority of its owners — supposing María de Toledo had not given him such authority—except from 1547 to 1550, at which date Don Luís Colón, to whom alone henceforth belonged this precious collection, came back to Spain.

We have now sufficient data on the point we wished to clear up. We know that the papers Las Casas mentions, and from which he made so many excerpts, were those of Columbus himself, of his brother Bartholomew, and of his two sons, Diego and Ferdinand; that is to say, in short, all the papers of the discoverer's family: we also know that, at the time Las Casas came back to Spain to put the finishing touch to his *History of the Indies*, María de Toledo and her son, Don Luís, were alone in a position to enable him to consult these treasures. We may therefore with certainty conclude, that it was first the Vice-Queen of the Indies, widow of the second Admiral of the Indies and mother of the third, Don Luís Colón, and afterwards Don Luís himself, who gave the author of the *História de las Indias* leave to examine the documents he has placed under

such heavy contribution; documents many of which unfortunately are known to us to-day only through this work.

IV.—THE FORGER WAS NOT COLUMBUS.—The conclusions we have reached render easier the search for the original source whence issued the correspondence attributed to Toscanelli. If that correspondence was first produced, as Las Casas gives us clearly to understand, from among the family papers of the discoverer confided to his care, the real author of this singular production can only have been one of the persons whose papers Las Casas had received—that is to say, either Columbus himself, his brother, or one of his sons, or one of those persons who had had possession of these documents, and who alone were in a position to introduce among them apocryphal pieces—namely, Las Casas himself, María de Toledo, or her son, Don Luís Colón. We shall proceed to examine the various hypotheses raised by these conclusions.

Might it have been among the papers coming directly from Columbus himself that these letters of Toscanelli were found? Had it been so, it would seem that the Latin texts should also have accompanied them, and not merely a Spanish translation; for it stands to reason that the translator of these letters was also the possessor of the original documents, whose existence has been supposed; besides, had Columbus ever really been in correspondence with Toscanelli, where should he have placed documents so invaluable to him except among his family papers? But, on the other hand, if the translation in question came from Columbus, Las Casas, who generally quotes his authorities, particularly when he is dealing with the writings of Columbus

and his son,[156] would have said so; it may even be thought he would have hastened to cite the name of Columbus in this connection, both his interest and his duty as an historian demanding from him no less. The silence maintained on this point by Las Casas is sufficient reason for believing it was not through the papers of Columbus that he acquired his knowledge of these famous letters.

At the first blush, however, it would appear he who was to profit by it must be the author of the deceit, and that, consequently, it was Columbus who imagined this correspondence: but here we are faced by a very formidable obstacle, for Columbus never did profit by it, the correspondence never having been produced until fifty years after his death, and no line or trace having been discovered in any of his writings or deeds to show that he had even known of the existence of Toscanelli. We should therefore be supposing Columbus fabricated the letter to Martins, and the correspondence which followed on it, in order to make no use of it whatever. This is a self-evident absurdity.

Can we see a proof, or merely a presumption, of Columbus' participation in the concoction of the most important of these letters in the fact that he appears to have made a copy of it on the fly-leaf of a book belonging

[156] Thus he says he textually copied from the writings of Ferdinand Columbus his chapter v, which corresponds with chapter vi of the *Historie*, and he declares he borrowed, not from Ferdinand, but from Columbus himself, all that he relates in chapter xiii, which is chapter ix. of the *Historie*. For the first assertion, see the summary of chapter v, vol. I., p. 55, and the end of the chapter, p. 57. For the second, see p. 97, where he says he copies the very words of Columbus, and p. 101, where he repeats the same thing.

to him? But this fact itself is far from being established.[157] The only proof brought forward in its support is that

[157] *Did Columbus copy the Letter to Martins?*—It must be remarked here that most critics, if not all, recognise Columbus' handwriting in this transcription of the letter to Martins. Mr Harrisse was the first to express this opinion (*Fernand Colomb*, p. 89), which he repeats in his *Discovery* (p. 380). The learned and very amiable perpetual Secretary of the Academy of History of Madrid, Señor Césareo Fernández Duro, whom I consulted on this point, and Señor Asensio, whose opinion he was good enough to ask on my behalf, both share this view. It is the same with MM. Uzielli and Cesare de Lollis (*Raccolta Colombiana: Autografi di Colombo*, preface, p. xiii.). The last, who has made a very careful study of the question, recognises two types in Columbus' handwriting: one, which he designates by the letter *a*, is more rapid and disjointed than the other; the second, marked by the letter *b*, is more regular and rounded. Some of the notes in the *Imago Mundi* and the Toscanelli letter in the volume of Pius II would seem to belong to the first type, whereas the title of the letter would appear to belong to the second type (*loc. cit.*, p. xvi.). This theory is ingenious, but ingenious only; for an expert in handwriting could easily draft a report arriving at an exactly opposite conclusion, based on the very signs which lead M. de Lollis to think he recognises the two types of Columbus' handwriting.

It is difficult to believe that the line which serves as the heading to the letter: *Copia misa Christofaro Colonbo per Paulum fixicum cum una carta navigacionis*, can be from the same hand that wrote the letter. Without mentioning the form and regularity of the characters, which may be due to the care one is accustomed usually to take in tracing the title of a document, it is necessary to observe that we find therein a word spelled differently from what it is in the body of the letter. The author of the title writes *fixicum*, whereas a line lower the copyist of the letter writes *phisicus;* he also writes *ChristofAro ColoNbo*. Finally, as the present librarian of the Colombina, Don Símon de la Rosa y López, pointed out to me, the ink of the headline is not the same as that used to write the letter, and the copyist of the letter has begun his work so close to the top of the page that scarcely room enough was left for inserting the title. We cannot therefore doubt this line was added afterwards and by a different hand to the one that copied the letter. Señor Símon de la Rosa y López thinks this was the hand of Ferdinand Columbus. It is remarkable that Bartholomew Columbus in a note on the

resemblance of handwriting which is notoriously so deceptive that very little reliance can ever be placed upon it, and which, when unsupported by other evidence, can never be taken as convincing proof. The fact that the work of Pius II, on the fly-leaf of which the document is transcribed, belonged to Columbus proves absolutely nothing, inasmuch as this transcription was only discovered there in our own day.

If the letter be false, and if it be desired to implicate Columbus in the forgery by the fact that the sole transcription we have of the document is in a writing resembling his, it remains to be explained why he never made use of it; why he never mentioned it; why he so carefully

Colombina volume of Pius II, admittedly in his handwriting, employs the form *fixicum*, just as it is in the title of the letter (see note 860 to the Pius II, in the volume *Autografi di Colombo* of the *Raccolta*). It may also be asked if Ferdinand Columbus, who was a scholar, could have written such a title. As regards the body of the letter, Señor de la Rosa y López, who at first thought he recognised in it the writing of Bartholomew (*Bibliotéca Colombina catálogo*. . . . Seville, 1892, vol. I., 1888, p. 52), corrects himself later on (*ibid.*, vol. II., p. xii., note), and was good enough to write to tell me he persisted in his opinion that Columbus is indeed the author of the copy in question. It is none the less true, by the admission of the learned librarian himself, that a considerable portion of the notes in the book are in Bartholomew's hand (*loc. cit.*, vol. II., p. xxvii.), and that there is a great resemblance between the writing of the two brothers (*loc. cit.*, vol. I., p. 52, note, and vol. II., p. xxix.), which shows at least the possibility of committing an error in apportioning the parts written by each of them.

Without wishing to enter into the discussion of this question, which would carry us too far, and which, moreover, in our humble opinion, would have no definite result, we give at the end of this work several facsimiles which will permit the curious to indulge in a closer study of this small problem. These facsimiles are *enlarged* reproductions first of the famous letter, and then of the handwriting of Columbus and of his brother Bartholomew.

concealed it that throughout his life, and for long afterwards, its existence was not even suspected.

If, on the other hand, it be urged that the transcription attributed to Columbus is a proof of the authenticity of the letter, it is still necessary to explain why he hid the existence of a document so important and so flattering to himself, not only at the time it would have been most useful in conquering the opposition made to his project, but throughout the whole course of his life. If it be supposed he kept silence on this matter because he did not wish the certainty he had of discovering the Indies to become known, outside the fact that this supposition does not reflect to his credit, it does not explain all the contradictions and improbabilities raised by the admission that it was really Toscanelli who addressed this letter to Martins: viz., searching for the route to the Indies in 1474, whereas that question was first mooted in the reign of King Joao II, who only came to the throne in 1481, the year before Toscanelli died; the adoption by a mathematician like Toscanelli of the cosmographical system of Marinus of Tyre, which Ptolemy had exploded; the reference to the spice trade of the East at a time the Portuguese took no interest in that trade; the absolute ignorance of all Portuguese authors of the time as to the existence even of Toscanelli, not to mention the undertaking he is supposed to have encouraged; the silence maintained by all the Italian authors, the contemporaries and friends of Toscanelli, as to the great design attributed to him; the impossibility of finding any authentic trace of the existence of the person who is said to have acted as intermediary between Toscanelli and King Alfonso, etc., etc.

To resume: we may say that the only indication that

is supposed to show Columbus knew of the existence of the letter to Martins is unconfirmed by any other; and many reasons can be found for proving that indication inconclusive. Let it be added that if Columbus really copied with his own hand this letter, it is no proof that the letter was genuine; one could only conclude from this fact that he knew of the fraud—if it be shown that fraud there was.

V.—IT WAS NOT FERDINAND COLUMBUS.—Was the contriver of the deceit Ferdinand Columbus, as we might be tempted to think?[158] In that case Las Casas would have lifted the letters in question from the manuscripts of the son of Columbus; but he would then have mentioned his authority just as he does at other times when he borrows something from the writings of Ferdinand. One cannot, indeed, see why he should have hidden this important feature, which would give so great an authority to the remarkable fact he puts forward, and which had hitherto remained absolutely unknown. Another reason, which strengthens the belief it was not from Ferdinand Columbus that Las Casas knew of Toscanelli's letters, is that the Italian version the *Historie* gives of these letters seems to have been

[158] Several reasons may suggest this supposition. These letters were first published in the *Historie*, a work attributed to Ferdinand Columbus, and Las Casas possessed some of his writings relating to his father; then again Ferdinand Columbus was the only member of his family able properly to translate these documents; and, finally, it is on a volume forming part of his library that subsequently was found a copy of the Latin text of the letter to Martins. These reasons are specious: they wither away before the studied silence Las Casas evidently keeps on this subject.

translated from the Spanish text of Las Casas. The writings which Ferdinand Columbus had left on his father, writings certainly known to the compilers of the *Historie*, did not therefore contain the original texts of these letters, otherwise the Italian translator would not have rendered them from the Spanish. Should it be contended that, notwithstanding the fact Las Casas does not state the Spanish translation of the letter he gives comes from Ferdinand Columbus, he may nevertheless have borrowed it from him, which would account for the similarity of the Spanish and Italian versions, the reply would be that Las Casas' Spanish text of the letter contains unmistakable *Italianisms*, and consequently cannot come from Ferdinand, who was at once a ripe scholar and a Spaniard born and educated in Spain. This argument is conclusive: it shuts the door to all attempts to connect this son of Columbus with the forgery.

We may furthermore add that the so-called second letter of Toscanelli to Columbus, which follows the first letter both in Las Casas and the *Historie*, is such a composition (obviously a draft of the first letter) that a man of literary culture and taste like Ferdinand Columbus would not have inserted in his writings.

VI.—THE FORGER IS PROBABLY BARTHOLOMEW COLUMBUS.—Can these famous letters have come from Bartholomew Columbus? It is at once possible and probable. Bartholomew was very devoted to his brother, and, judging by certain remarks of Gallo and Las Casas, it would seem he had received a better education than his senior. Like Christopher, he left behind a considerable number of letters and papers which no longer exist, but

which were well known to Las Casas, for he admits he had many of them written in Bartholomew's own hand.[159] Several volumes in the Colombina are also annotated by him. Bartholomew was therefore in a position to write the letter to Martins and those to Columbus, and several circumstances may be adduced which afford great weight to the opinion that the fraud was indeed committed by him.

First let us state that some of the notes found on the copy of Pius II in the Colombina are undoubtedly in the handwriting of Bartholomew. This fact is attested by the best authority on the autography of Columbus and his family, Don Símon de La Rosa y López.[160] The same applies to at least some of the notes which cover the margin of several leaves of Cardinal d'Ailly's treatise, the *Imago Mundi*, a book Columbus, according to Las Casas, had made his bedside companion.[161] To this indication we must add another which, under the circumstances, is of great importance; it is that the handwriting of Bartholomew had a striking resemblance to Christopher's. Las Casas says so, and the librarian of the Colombina has also recognised it.[162] From this it results that the only reason there is for supposing Columbus knew of the letter to Martins—the transcription of the letter attributed to him—loses, if not all, at least a great part of its

[159] *História*, vol. I., pp. 213-214.

[160] Símon de la Rosa y López: *Catálogo*, vol. II., p. xxvii.

[161] Las Casas: *História*, Book I., chapter xi., p. 89. See above: note 107.

[162] La Rosa y López: *Catálogo*, vol. I., p. 52, note 2; and vol. II., p. xxix., where he says the resemblance of the two writings is such that they may be mistaken for one another.

value, when it is admitted this transcription may have been done by Bartholomew just as likely as by his elder brother.

This conclusion which compromises Bartholomew would be insufficient for refusing to bring in a true bill against Columbus, did not other considerations come also to his rescue. Columbus, as has been shown, never breathed a word of Toscanelli or of his letters, a fact as difficult to understand supposing they are authentic as in the case that he himself had joined in their fabrication. Can we also say that Bartholomew never spoke of them? This cannot be answered, for we no longer possess his writings, while we have a great number of Christopher's, in which it is found he maintains an absolute silence concerning the documents attributed to Toscanelli, even in circumstances where he must have spoken of them had he known of their existence. This fact, without being absolutely conclusive, shows, nevertheless, that if the writing of the copy of the letter to Martins is to be taken as proof that the writer was also the author of the fraud, this evidence tells rather against Bartholomew than against Columbus. Yet another fact may be laid to Bartholomew's charge in this affair. It is that, according to Las Casas, who had in hand many of his manuscripts, he wrote bad Latin,[163] which is precisely the case with the writer of the letter to Martins.

Does this chain of circumstantial evidence suffice to justify a verdict of guilty against Bartholomew as being

[163] Las Casas: *História*, vol. I., p. 214. Señor de la Rosa y López confirms this remark by saying that Bartholomew was, like his brother, ill versed in Latin construction and syntax (*loc. cit.*, vol. II., p. xxvii.).

the author of the suspected fraud? Evidently not with any certainty. In such cases, however, it is not possible to bring into court positive and material proofs. All that can be done is to establish presumptions, and, when it is found that all the circumstances bearing upon a fact point to the same conclusion, it must be admitted we find ourselves in presence of suspicions which almost possess the value of actual proof.

VII.—PROBABLE COMPLICITY OF LAS CASAS.—To the assertion that Bartholomew was probably the author of the letters attributed to Toscanelli, it may be objected that, were this so, the fact could not have escaped Las Casas, who was very well acquainted with the handwriting of this brother of Columbus, and had also known him personally. We must therefore believe that Las Casas was either ignorant of the real source whence came the documents he was the first to register, which seems in no way to be probable, or that he knew this source and has concealed it. This last supposition has nothing improbable about it.

Las Casas was indeed a good man; but he was also a passionate man: like all persons who are governed by passion he did not always see justly, and it may be he brought himself to think he might hide or alter facts on behalf of a moral interest he set even above the claims of absolute truth. At least there are undoubted traces of this obliquity of vision in nearly all he has related of the early life of Columbus. To any one who takes the trouble to think, it is altogether inadmissible that a man placed as he was should have been ignorant of the most trifling

detail connected with the origin and early life of Columbus. He was in possession of the family papers; he knew or had known personally all the members of the family, including the great Columbus himself; he had lived in Hispaniola among the companions of the discoverer, and at the moment of writing his history he enjoyed the confidence of her who then represented the headship of the family, María de Toledo, the widow of Don Diego I. Yet, nevertheless, he who was thus in a position to learn all he wished with regard to the Columbus family, he who for years had been gathering together materials for a book which he never ceased to retouch until 1561 at least, he from whom alone, among all the writers of that time, we have a right to expect authentic details as to the interesting events of the life of his hero, either maintains a stubborn silence thereon, or states things absolutely inadmissible, and he goes to a Portuguese historian, Barros, who had never seen Columbus, who knew nothing about him except at second or even third hand, in order to obtain what he tells us of the most important phase of Columbus' career in Portugal!

While on this subject let us recall once more the ambiguous language Las Casas uses when speaking of the manner in which the documents attributed to Toscanelli were given to him. He has had in his hand a Spanish translation of the letter to Martins: he has also had possession of the map that accompanied that letter, together with other papers in the Admiral's own handwriting.[164] That is all. There is here, undoubtedly, a deliberate reticence. Las Casas knew more than he pretended to know. It may be

[164] *Loc. cit.*, vol. I., pp. 92 and 279; see above, note 152.

urged in his favour that, if he sought to pass off as genuine documents which he knew to be false, he would have abstained from telling the story of the pilot who is said to have instructed Columbus, since it is this evidence that removes all doubt that might exist as to the truth of that story. This objection has its value: but it is not powerful enough to destroy the reasons we have for saying Las Casas had deliberately hidden or disfigured certain facts relating to Columbus. We do not think of everything; and Las Casas, who, moreover, did not attach any importance to this tale, the full force of which he probably failed to appreciate,[illegible] did not surely foresee, when showing it was true, that he was giving the key to the fraud of which we are seeking the proof and origin to-day. The supposition that Las Casas may have lent himself to a deceit, devised for the purpose of exalting the merit of Columbus, has therefore nothing improbable about it, and we are unable to gather from his language or from his silence any indication at variance with the presumptions which point to Bartholomew as being the author of the letters attributed to Toscanelli.

VIII. PROBABLE DATE OF THE FRAUD.—Bartholomew was a man of great energy, very devoted to his brother,

[illegible] In the belief of Las Casas, Columbus was a man of Providence. [illegible] he was guided by the finger of God, and all the information [illegible] from the experiences of pilots or from the science of [illegible] he had either read or consulted, was only added by Providence [illegible] the one had no greater importance [illegible] the experiences of pilots nor the science of [illegible] See *Las Casas: História*, Book I., chap. [illegible]

as we have already remarked, and most decided in all his actions. If, when he arrived in Spain, shortly after Columbus had sailed on his second voyage, he learned that the discovery was attributed, not to his brother's cosmographical and nautical knowledge, but to the revelations of an obscure and ignorant pilot, it is easily conceivable he hastened to deny this rumour, and that, in order to make his denial efficacious, he thought of mentioning some letters written by a learned Italian as being the real origin of the great enterprise which had so well succeeded. At this period Toscanelli had been dead eleven years, and could not deny he had written the letters thus fathered on him. As to Fernam Martins, who may never have existed at all, and if he had ever lived was now also in all probability in his grave, he was equally not in a position to raise his voice in protest. Bartholomew, on the contrary, was well able to speak of his brother's sources of information; he had shared his life in Portugal, he knew his inmost thoughts better than any one, and it has even been said he was himself his brother's inspirer.[166] In such a situation his word could not fail to carry weight, and it was sure to discredit the floating legend of a pilot who had revealed the secret of the route to the Indies.

A serious objection to this hypothesis is the lateness of the period when these letters of Toscanelli are mentioned for the first time; Las Casas himself it is who first speaks of them, and, as we think we have shown, he could not have come into their possession except between 1547 and 1552. What explanation, therefore, can be offered for

[166] Gallo: *De navigatione Columbi* in Muratori: *Rerum Italicarum*, 1733, vol. XXIII., p. 302.

hiding them so long under the bushel? To this objection it could be replied that the letters themselves may have been concocted at a late date, for, from a critical examination, it is found they contain ideas belonging solely to Columbus, ideas to which he gave expression only after his voyages. Moreover, the material production of the letters was unnecessary. It sufficed merely to say they existed in order to obtain the desired result, and this is probably what was done. If things happened as we surmise, it explains how Duke Hercules, who, in 1494, was inquiring into the relations of Toscanelli with Columbus, may have heard from some Italian living in Spain what was being said on the subject, and come to believe in the report.[167]

If the letters purporting to be Toscanelli's are really false, we may be certain they were concocted after the time when he who was to forge them thought of speaking of imaginary relations between Columbus and the learned Florentine, or perhaps after the death of Columbus, who probably was unwilling to subscribe to the trick, and who assuredly always acted as though he were ignorant of the existence both of Toscanelli and of his letters. Looked at from the standpoint that it was Bartholomew who committed the forgery and who wrote the transcription on the fly-leaf of Pius II's book in the Colombina, the fraud may have been perpetrated in the interval between Columbus' death in 1506 and Bartholomew's in 1514. Nevertheless, it is possible it may date back earlier, but

[167] See above, note 25. The explanation here suggested of the inquiry set on foot by Duke Hercules is very venturesome, and we dare not maintain it absolutely. Yet, what other explanation can be given to account for this inquiry, if the letter to Martins is apocryphal!

in any case it cannot be before the fourth voyage of Columbus, since, prior to that voyage, he had not fully completed his cosmographical system, of which the letter to Martins is the expression. For some unexplained reason no use was made of these letters which we suspect were forged in this manner; it may be Columbus declined to associate himself with a fraud of which he disapproved, and which, moreover, had become useless in 1498, the very earliest date that can be assigned to it; it may be Bartholomew did not find occasion to produce the letters, or that later Ferdinand Columbus did not choose to do so; anyway, they remained absolutely unknown until the moment they were handed over to Las Casas.

IX.—THE GIVING OF THE DOCUMENTS TO LAS CASAS.—What Bartholomew and Ferdinand Columbus could or would not do another person actually did. The writing of such a work as Las Casas', which is the chief storehouse for the history of the discovery and colonisation of America, furnished the holders of the apocryphal documents with the opportunity and the means for making them public, and thus fulfilling the wish of him who had forged them. And so it happened; for before Las Casas published them they had been quite unknown. It remains, therefore, to find out who it was that communicated them to the Bishop of Chiapas? If we recall what has previously been said respecting the disposal of the papers of Columbus and of those of the other members of his family, it may not be difficult to reply to this question. The only possible holders of the so-called Toscanelli letters, which were remitted or carried to Las Casas, could

be those who at this period were in a position to hand him all the Columbus family papers, namely, María de Toledo and her son and ward, Don Luís Colón, sole heir to his father Diego I and his uncle Ferdinand, and consequently then the only possessor of all the estates, titles, and papers of the discoverer's family, as has been already stated.

X.—MARÍA DE TOLEDO.—There is no suggestion here that María de Toledo had either hand or part in the trickery we are seeking to lay bare. Diego's widow was a woman of high character, who showed both energy and dignity in defending, even against the crown, the rights of her husband and of her son; but it is highly probable she did not grant her confidence and her support to Las Casas until she was assured he would speak of Columbus in a manner that should prove agreeable to her Spanish relatives.

It must not be forgotten that Columbus had found great difficulty in getting himself received by the proud Castilian nobles; to tell the truth, he never quite fully succeeded. They scorned his foreign extraction, his obscure birth, his lowly origin; above all, they bitterly resented his rapid rise to fortune that even over-topped their own. Columbus was so moved by this scorn and resentment that he was guilty of the weakness of hiding the truth in his efforts to reply to them. The Spanish family with which he was allied through the marriage of his son, Diego, had the same motive as himself for forgetting the past, and for elevating, in the eyes of posterity, the family whose name had now become linked with

their own. One may, therefore, well understand that the great man's heirs, who had in their keeping the chief sources of information as to the early days of the discovery and colonisation of America, should have imposed their own conditions before opening wide their treasures to him who was about to write the history of those times; and thus may be explained the remarkable reticences, the deliberate obscurities, and that flagrant ignorance on certain points of Columbus' history, displayed by a historian to whom everything appears to have been told, everything laid bare. But if it be possible that María de Toledo may have inspired or influenced Las Casas in the manner we have just indicated, we are very far from admitting that this noble woman plotted either with him, or with others, the fabrication or publication of apocryphal documents, such as the pretended letters of Toscanelli.

XI.—DON LUÍS COLÓN PROBABLY GAVE THE DOCUMENTS TO LAS CASAS.—We are not restrained by the same delicacy with regard to her son, Luís Colón, the sad heir of the discoverer's great name, of his titles and of his high honours. Shortly after his mother's death, which occurred in Hispaniola in 1549, he returned to Spain, where we find him engaged in love affairs, very little to his credit, and in long contests with the royal authority, which sought more and more to diminish the privileges granted to his grandfather. At this period he was the sole owner of his family papers, and we find him occupying himself with preparing for publication manuscripts that had belonged to Columbus or which referred to him. In 1554 he obtained authority to print a book written by Columbus

himself;[168] and we know it was through him that the manuscript which served to compose the work produced at Venice in 1571, under the name of Ferdinand Columbus, reached the Italian publishers.[169] We do not know what

[168] This work, now lost, is mentioned by Columbus in a letter of February 1502 (Navarrete, *Viages*, etc., vol. II., p. 280). It had been written in the form of the Commentaries of Cæsar, that is in the third person, for Pope Alexander VI. Mr. Harrisse (*Christopher Columbus and the Bank of St George*, p. 49) and Signor de Lollis believe, however, that the work in question was the original text of the Journal of the first voyage of Columbus (*Scritti di Colombo*, vol. II., in the *Raccolta Colombiana*, pp. vii.-viii.). The permission to print it obtained by Luís Colón is dated 9th March 1554. Asensio has published it in extenso (*Cristóbal Colón*; Appendix C to the Introduction, vol. I., pp. cxiv.-vi.). It may be seen in the *Raccolta Colombiana*, *loc. cit.*, and also in Señor Jiménez de la Espada's *Relaciones geográficas*, and in Captain Duro's *Colón y la História póstuma*, Madrid, 1885, pp. 129-132. Whatever may have been the work in question, it has disappeared since it passed into the hands of Luís Colón. This does not appear to have been the only manuscript of his grandfather which vanished in the hands of the Discoverer's heir, for we learn from a letter of d'Almeida to the King of Portugal, found among the Archives of the Torre do Tombo, and communicated to S. de Lollis by the Abbé Peragallo, that d'Almeida had obtained, through the kind intervention of the Countess de Lemos, permission to have copied a manuscript by Christopher Columbus on the line of demarcation drawn by Pope Alexander VI, dividing the lands and seas belonging to Portugal and Castile, which manuscript was in the possession of the Admiral Don Luís (*Scritti*, *loc. cit.*). This work, which Columbus must have written for the Catholic Kings, who requested him by a letter dated 20th June 1494 to undertake such a task, has also disappeared. Finally, another document, the *Memorial del Pleyto*, discloses to us that several other writings of Columbus had gone into the possession of Don Luís, who had withdrawn them from the Chapel of Santa Ana in the Convent of Las Cuevas. Among these documents was the testament of 1498 (See de Lollis, *Scritti*, vol. II., p. xi., note 3).

[169] Spotorno, who supplies the only information we possess on the origin of the *Historie*, says that Luís Colón came to Genoa in 1568 and gave the manuscript of this book to the patrician Baliano de Fornari,

has become of the work by Columbus which Luís obtained permission to print, and which doubtless he took from the Colombina or from the family archives; but we still possess the work, attributed to his uncle Ferdinand, which was sent to Italy for publication, and we also know it is a composition in which probably Ferdinand took very little part; one has even good reason to believe it has partly been based on Las Casas' own book. Luís Colón was a man devoid of morality and constantly engaged in all sorts of questionable intrigues. To what extent he participated in concocting the *Historie* it is now difficult to say, although we do not entirely lack information on this point; at any rate it is probable that he played possibly even a considerable part therein; one thing is,

who confided it to Marini, by whose care it was published at Venice in 1571 (*Codice Colombiano*, p. lxiii.).

We do not forget Mr. Harrisse has shown, by excellent reasons, that it is impossible to admit Luís Colón could have gone to Italy at the period stated (*Fernand Colomb*, pp. 35-38). But, admitting the learned Barnabite was mistaken on this point, it does not destroy the fact set forth in the dedication of the book, dated 25th April 1571, that the manuscript of this work comes from Don Luís Colón.

This dedication says neither whence, when, nor how the original Spanish manuscript of Ferdinand Columbus passed from the hands of Luís Colón to those of Fornari, and Spotorno's conjecture that this occurred in 1568 may be incorrect without invalidating the fact itself. In truth it was only Don Luís at that period who was in a position to take out the manuscripts of his uncle on the life of Columbus from their safe keeping in the Convent of San Pablo, and to dispose of them at his free will. See on this point the remarks of D'Avezac (*Le livre de Ferdinand Colomb*, Paris, 1873, pp. 1-7), and those of S. de Lollis (*Scritti*, etc., vol. II., p. xi.). Both these gentlemen take for granted, and as being beyond question, that the original manuscript of the *Historie* came from the source indicated by Moleto in the dedicatory letter of that work.

however, certain; from that day disappeared for ever the memoirs Ferdinand Columbus had really written on his father.

Do these particulars justify the supposition that Las Casas obtained the translations of the correspondence which is supposed to have passed between Toscanelli and Columbus from the latter's grandson? It might seem so. It is true the suggestion is somewhat venturesome, being based only on slight indications; but it is not wanting in probability when the circumstances under which the documents were produced are considered, and also the logical impossibility of attributing their appearance to any other member of the Columbus family. If surprise is felt at this late production, it may be remarked that it not only coincides with the preparation of Las Casas' book, but also with quite a recent revival of fresh allusions to the story of the nameless pilot who is reported to have informed Columbus. This story, which, according to Las Casas, circulated freely during the early years following the discovery, was probably forgotten when, in 1535, Oviedo recalled it in a book which was reprinted in 1547, and Gómara reproduced it in the editions of 1552, 1553, and 1554 of his *History*, giving it, moreover, a turn distinctly unfavourable to Columbus.[170] It is probable enough these two authors were not the only ones who, at that period, repeated the troublesome story, and we may well see here a circumstance of such a nature as was likely to incite a member of the Columbus family, so unscrupulous as Don Luís, to destroy the sting of a rumour so widespread and damaging to the memory of the discoverer of the

[170] See above, note 141.

New World, by bringing to light a correspondence which demonstrated Columbus had no need of any pilot's advice in order to find the road to the Indies. This theory for explaining the production of the letters attributed to Toscanelli is, it must be repeated, purely hypothetical in character ; and it is only advanced as a possible explanation of an undoubted fact, otherwise unexplainable, that these letters, never heard of before, first appeared in a book written or revised from 1547 to 1561, wherein it is said they reached the author along with other family papers of Columbus confided to his care.

At this period the personal papers of the discoverer were, we repeat, deposited in a chapel of the Convent of Las Cuevas belonging to Luís Colón, to which chapel, after his mother's death in 1549, he alone had right of access. It is possible the so-called Toscanelli letters were not with them ; in any case no trace of them was to be found when, later on, these papers were handed over to the family. But they might have been among the other papers of the family which, with the Colombina, also belonged to Don Luís, and which remained in his possession even after he had lost his uncle's library. We may therefore insist upon the point that, in all probability, Las Casas got the documents in question from the man who was sole heir at once to the Admiral and his two sons.

The supposition that Bartholomew Columbus is the author of the letters attributed to Toscanelli, and that it was Luís Colón who delivered them to Las Casas, although not supported by any direct proof, is the only one in full accord with all the known facts of the production of these documents, and the only one that explains their forthcoming

in a plausible manner. If we discard this explanation there is none other possible except to fix the fraud on Columbus himself or on Las Casas, two hypotheses which raise difficulties it is very hard to answer.

We now proceed to the examination of the second item of this suspected correspondence, the map which is supposed to have accompanied the letter to Martins, and which, after being sent to Columbus with a copy of this letter, is pretended to have served him as his chart on the voyage which resulted in his great discovery.

SECOND PART

THE MAP

SOURCES OF INFORMATION.

BIBLIOGRAPHY.

I.—Sources.

Of the three examples of this map, said to have existed; the copy forwarded to Canon Martins for King Alfonso, the one made for Columbus, and the original which the author must have kept by him since he was enabled to make copies, not one has reached us. Columbus has never spoken of this map, and his son, or the compiler of the *Historie*, only mentions it indirectly. Las Casas alone avers that he saw it, that he had it in his possession, and describes it. With this single exception, all Columbus' contemporaries, all the companions of his voyage, all those who had access to his papers or were in relation with his family, ignore, as he appears to have himself ignored, the existence of this document. We therefore only know this famous map by what is said of it in the letters Toscanelli is supposed to have sent to Columbus; by what Las Casas, the sole witness who saw it, says of it, and by what may be obtained from the Florentine documents, if they are Toscanelli's, and if they refer to the map he is reputed to have sent to Martins and Columbus.

For facilitating discussion the map will be here spoken of as though admittedly it was Toscanelli's.

TOSCANELLI.—The letter to Martins and the correspondence with Columbus.

For the letter to Martins, see the Bibliography at the beginning of this work.

LAS CASAS.—1552-1559.—*História generál de las Indias.* Las Casas, who had before him, when he wrote his book, a map which he says is the one mentioned in Toscanelli's correspondence, refers to it on several occasions, notably in chapter l. of Book I. (vol. I., pp. 360-361); but also he speaks of it in the following chapters of the same book: xii., p. 92; xxxviii., pp. 278-279; xliii., pp. 316-317; and xlv., pp. 327-328. He describes it as a "nautical map relating to Cipango" (p. 92); says it is "on parchment" (p. 360), and that it was "a certain Marco Paulo, a physician of Florence," who sent it to Columbus (*ibid.*), a statement he several times repeats (pp. 278-279 *et passim*). He assures us he has this map in his possession (*la cual yo tengo en mi poder*), "as well as other pieces and writings from the hand of Columbus which they have placed in my power" (*que trajeron á mi poder*), p. 279. Unfortunately he does not say who *they* may be. Mr. Harrisse has supposed the map in question to have formed part of the library of Ferdinand Columbus, which, after his death, was given in charge to the Dominicans of the San Pablo Convent at Seville; and that it was these religious, of whose Order Las Casas was himself a member, who lent him the papers of Columbus when, in 1544, he was consecrated Bishop in their Convent (*The Discovery*, p. 379). But the religious of San Pablo were merely the depositaries of the Colombina; and it is unlikely they would have touched their trust without authorisation from María de Toledo who had confided it to them, or from

Luís Colón to whom it belonged. We prefer to believe it was the latter who communicated to Las Casas this document, which, with several others, returned no more to the Convent of San Pablo. (See above, chap. vi., § 3.)

THE HISTORIE.—1571.—In this book the map is only mentioned in the text of Toscanelli's letters. The author remarks that these letters—an expression which doubtless included the accompanying map—had a great influence on the decisions of Columbus; an assertion which, like the text of the letters, is to be found in Las Casas, who does indeed give it to be understood that these documents came from the Columbus family, but not that the discoverer's son had said they had exercised any action whatsoever on his father. This assertion Las Casas makes solely on his own authority.

SKETCH OF A MAP, ATTRIBUTED TO TOSCANELLI. — *Codici Magliabechiano.* Manuscript of the Florentine Library, class xi., No. 121.

This document found annexed to a lecture by Toscanelli on the comet of 1456, and which for this reason is attributed to him, is an outline or sketch divided into longitudes and latitudes, ready prepared to receive the tracing of a map. The intervals are of 5 degrees, and of these there are 36 along the latitude, giving 180 degrees, or one-half of the sphere. Signor Uzielli, who has given an account of this discovery in his Memoir on the size of the earth according to Toscanelli, mentioned later, and who has reproduced the document in facsimile in his volume on *Toscanelli* in the *Raccolta Colombiana*, Plate IX., does not doubt it was a similar sketch which Toscanelli employed to draw the map he sent to Martins. M. D'Avezac has expressed some doubt on this point, based on the

statement that the sketch of the Florentine manuscript was prepared for a map of flat projection with equal degrees, which does not appear to have been the case with the map of 1474. Signor Uzielli thinks this 1474 map being, by the very terms of the letter to Martins, a sea map must have been projected on a parallelogrammatic plane. (See on these points, *Toscanelli*, No. 1, 1892, pp. 7-12). Herr H. Wagner, on different grounds to those given by M. D'Avezac, does not think this outline could have been used for constructing the 1474 map. In our opinion, the map of 1474 not being Toscanelli's, the above-mentioned outline or sketch, and also the list of longitudes and latitudes, and the note referred to later on are in no way connected with this map.

LIST OF LATITUDES AND LONGITUDES joined to the above-mentioned sketch of a map and equally attributed to Toscanelli.

Signor Uzielli has reproduced this list, pp. 615-623 of his *Toscanelli* in the *Raccolta Colombiana*, and again in part on the upper portion of his reconstruction of Toscanelli's map. It is to be noticed that of all the geographical names in this long list there does not appear one mentioned in the letter to Martins.

NOTE OF TOSCANELLI ON THE MANUSCRIPT OF THE COMET.—This note indicates that the degree equals $67\frac{2}{3}$ miles, that the mile contains 3000 cubits, the cubit 2 palms, the palm 3 ells 7 inches. This information forms the basis of Signor Uzielli's work of reconstruction.

THE GLOBE OF BEHAIM.—It is a generally received opinion that the globe of Behaim represents a cosmographical conception resembling Toscanelli's, so far, at least, as the Western Hemisphere is concerned, and we conform to

custom in entering this globe among the documents which may serve to throw some light on the map of Toscanelli.

II.—Attempts at Reconstruction.

Several attempts have been made to reconstruct this map: the principal are :—

O. Peschel.—*Das Ausland*, 1867. This is the best known; Winsor has reproduced it in his *Narrative and Critical History of America*, vol. II., p. 103, and in his *Christopher Columbus*, Boston, 1891, p. 111. Mr. Fiske has also reproduced it: *The Discovery*, vol. I., p. 356, and likewise Sir C. Markham: *Journal of C. Columbus*. Peschel says he bases this reconstruction on the very data of Toscanelli and those furnished by the globe of Behaim, by the Portuguese map of 1503, and by Ruysch's map of 1507. A studious examination of these documents does not confirm this statement. The projection adopted is trapeziform with converging degrees. Wagner absolutely rejects it.

Vivien de Saint-Martin.—1875.—*Histoire de la Géographie*, Atlas, Plate IX. It is an imitation of Peschel's map.

MacCown.—*Historical Geography of the United States*. New York, 1889.

Kretschmer.—1892.—*Die Entdeckung Amerikas*, etc. Tab. VII., No. 1. Very handsomely got up; it is also an imitation of Peschel's map.

Uzielli.—1893.—*Tentativo di ricostruzione della Carta inviata da Paolo Toscanelli a Alfonso V re di Portogallo e a Christoforo Colombo*, etc. Plate X. of the *Toscanelli* of the *Raccolta*. A very large sheet.

A reconstruction on an equidistant plane projection, based on the data given in § *Sources* compared with Fra Mauro's

planisphere and the globe of Behaim. Signor Uzielli forms the spaces of 5 degrees, each degree being equal to 67⅔ Florentine miles, or 75⅚ Roman miles, and to 605 stadia of 185 metres. This gives 111,927 metres to the equatorial degree, or 40,293,720 metres as the circumference of the globe round the Great Circle.

WAGNER, H.—1894.—*Nachrichten von der Königl. Gesellschaft der Wissenschaften zu Göttingen*, 1894, No. 3. A very meritorious effort which is not, like the others, a sort of reproduction of the globe of Behaim. It is a plane projection known as squared, the degrees cutting one another at right angles.

MURRAY, J.—1893.—*Scottish Geographical Magazine*. A reproduction after the globe of Behaim.

PARKER, W.—1892.—*Goldthwait's Geographical Magazine*, July 1892. This is a copy of MacCown's.

HUBBARD.—*Discoveries of America* (*Nat. Geo. Mag.*, Washington, April, 1892. Reproduction of Peschel.

MURRAY, JOHN.—1895.—*A Summary of the Scientific Results obtained at the Scunding, Dredging, and Trawling Stations of H.M.S. Challenger*. Plate VI., Atlantic Ocean, according to Toscanelli, A.D. 1474. The western part is reconstructed from Behaim's globe, the eastern part from charts of the Fifteenth Century. After H. Wagner.

III.—VARIOUS REFERENCES.

UZIELLI.—1873.—*Della grandezza della Terra secondo Paolo Toscanelli* (extract from the *Bolletino della Societa Geographica Italiana*, vol. IX., 1893).

Memoir in which Signor Uzielli has studied the sketch or plan in the Florentine Library, mentioned above, the con-

clusion being that Toscanelli's idea of the circumference of the earth was nearly exact.

WAGNER, H.—1894.—*Die Rekonstruktion der Toscanelli-Karte vom J.* 1474 *und die Pseudo-Facsimilia der Behaim-Globus vom J.* 1492.

A memoir read in July 1893 to the Royal Society of Sciences of Göttingen on the Reconstruction of Toscanelli's map and the pseudo-facsimile of the globe of Behaim, with map. In the *Nachrichten von der Königl. Gesellschaft der Wissenschaften zu Göttingen*, 1894, No. 3, pp. 208-312.

CHAPTER I

ATTEMPT TO RECONSTRUCT TOSCANELLI'S MAP.

THE question of the authenticity of the map Toscanelli is credited with forwarding together with his letter to Martins, a copy of which map it is also alleged he sent to Columbus, does not come before the critic under quite the same conditions as the letter itself. Of the letter we have only a copy and some translations that are of doubtful origin, while we have the positive statement of Las Casas that he had in his own hands a map which he assures us was sent to Columbus by Toscanelli, together with a copy of the letter to Martins, and he avers that this was the map which served as guide to the discoverer of the New World.

Two questions are therefore at once posed for the consideration of the critic. What was this map which is attributed to Toscanelli, to which reference is made in the letter to Martins, and of which Las Casas speaks; and, secondly, was this the map which Columbus used as his chart? Before entering into this discussion, let it be clearly understood that it is quite distinct from the question of the authenticity of the map. We want simply to find out what this map was from the data furnished by the letters, whether

apocryphal or not, which mention it, and from such other information as we possess on the subject. Afterwards we can enter on the second question, namely, did it serve as Columbus' chart? Let us add that the expression "Toscanelli's map," which will often come from our pen, is only used to avoid a periphrase, and that by this expression we simply mean the map mentioned in the letters and other documents already quoted.

I.—CARTOGRAPHIC SOURCES OF THE MAP.—If in what precedes we have made ourselves sufficiently clear, it follows that the famous map attributed to Toscanelli—the map Las Casas had handled and which had accompanied the etter to Martins—is, like the letter itself, apocryphal, and portrays, not Toscanelli's views on the ocean route, if ever he had any on that subject, but those which Columbus had himself formed after he had achieved his discoveries.

Still, as this map was alleged to be anterior to the great voyage of 1492, and as it was produced in order to show what Toscanelli and Columbus thought respecting the position of the Indies and of the possibility of reaching them by the west before they were actually so reached, it could neither display the real discoveries made by Columbus, nor yet the views these discoveries had led him to form. Any indication of that nature would have been an anachronism that must at once have given away the forgery. The compiler of the map has reproduced the geographical ideas of Columbus; but he has been careful to avoid introducing any which were notoriously the result of Columbus' discoveries. This having been stated, we shall now proceed

in quest of the cartographic sources whence the author of the map obtained those features which enabled him under this form to represent the notions borrowed from Marinus of Tyre and others as expressed in the letter to Martins.

II.—BEHAIM'S GLOBE.—It has become almost a religious belief that the globe of Behaim is just a duplicate of the so-called Toscanelli map; some writers have even gone so far as to suppose that Behaim, owing to the post he filled in Portugal, actually was in possession of the said map.[171] It is evident this map—in so far as it is known to us—and the globe of Behaim represented the ideas which the cosmographers of the close of the fifteenth century had formed respecting the smallness of the maritime space separating the two extremities of the ancient world, and on the position of the isles and countries that were to be found at the remoter part of that space. Geographical conceptions, as indeed any others, do not spring into existence ready made; they originate from some more or less well ascertained facts, and develop in a given direction until fresh observations or reasoning impart to them another tendency; but in nearly every case it is possible to trace them to their fountain-head and to recognise those which bear a family likeness.

Behaim's globe and the so-called Toscanelli map are cartographical documents closely related, inasmuch as they are the expression of the same conception and cosmographical ideas; but if the question be to determine the

[171] Ruge—*Biographie des Christoph Columbus*, Dresden, 1890, p. 62.

priority of one document over the other, we would, contrary to the general view, assert that the work of the Nuremberg cosmographer contributed towards the production of the letter to Martins and to its complementary map instead of these two documents having been utilised by Behaim. This assertion necessarily follows from the fact we believe we have proved, that the letter is antedated and was really drafted together with the map after the discoveries of Columbus, whose ideas they merely express. Behaim, whose globe dates from 1492, cannot therefore have known of these documents, as they were not yet fabricated. On the other hand, Columbus and his brother Bartholomew must certainly have known of Behaim's works, for Behaim dwelt in Portugal at the same time as them, took an interest in the same occupations, was like Columbus in personal relations with the king, and, if we are to believe Herrera, was his personal friend. Under such circumstances it is almost certain Columbus must have been acquainted with the cosmographical ideas of Behaim. That certain similarities exist between this cosmographer's globe and some of the geographical notions of the letter is undoubted; Peschel, Ruge, and Wagner have all three signalled this fact. Wagner has even made the curious observation that they are more noticeable on the globe itself than on any of its reproductions, and he does not hesitate to say these resemblances cannot be the effect of chance. All these authorities naturally suppose that Behaim had obtained knowledge either of the famous map or of the letter which accompanied it, for they are believers in the authenticity of these documents. But the problem wears a different aspect to-day when excellent reasons exist for alleging that these

documents are apocryphal. If the map of the pseudo-Toscanelli and the globe of Behaim are not different expressions of the same conception, if one of these documents contains information directly borrowed from the other, as Peschel, Ruge, and Wagner think, the borrower cannot have been Behaim; it was the author of the forgeries. But, after all, it is idle dwelling on these various suppositions. Whether it was Behaim who was inspired by the letter to Martins, as those think who consider this letter to be authentic, or whether it was Columbus who borrowed some ideas from Behaim, the globe and the letter possess in common only bearings of a very general kind, and these are peculiar neither to one nor the other of these documents.

The kingdom of Mangi and that of Cathayo, as well as Cipangu and Antilia, figure indeed on the globe; but Quinsay and Zaiton, on which the letter to Martins lays stress, do not appear. The one important item common to both documents is the reduction to 130 degrees of the maritime space stretching from the West away to Asia. But the idea of thus reducing this space was special neither to the author of the letter nor the constructor of the globe; it came, as we have shown, from antiquity, from Marinus of Tyre; and Ptolemy, through whom it was known, had been printed six or seven times before the construction of the globe. Cardinal d'Ailly had also mentioned it. Therefore, the famous globe of Nuremberg contains very little information which the author of the letter could not have found elsewhere, and it leaves out two of the most important indications of the letter.[172]

[172] *The Globe of Behaim.*—It is to be regretted that this precious and

III.—THE MAP OF FRA MAURO.—These two characteristic indications, Quinsay and Zaiton, are to be found on

curious witness to the state of geographical knowledge at the dawn of the discovery of America was not reproduced with perfect exactness at a time when its condition would still have permitted such a work to be performed. A so-called facsimile reproduction is preserved in the Bibliothèque Nationale at Paris, and several copies are in existence; but there are good reasons for doubting that these copies and even the Paris facsimile are absolutely accurate reproductions of the Nuremburg original.

Having been commissioned, in 1892, to get a reproduction of the Paris copy of this globe made for the National Museum of the United States, I had to make a study of all existing copies and reproductions. I append here a full list of these interesting documents with a few brief observations:—

1492. Behaim.—The original globe belonging to the Behaim family at Nuremburg. This globe has a diameter of 530 millimetres, is constructed of papier-maché, covered with a coat of plaster, which again is covered with vellum on which are depicted the coasts and legends in ink, colour, and gold. It was repaired in 1823; it was again in a dilapidated condition in 1853. When Wagner saw it in 1892 several of the legends were no longer decipherable. It is mounted on an iron stand, with a movable meridian and a brass horizon which have been subsequently added. It is not graduated. A single meridian, the equator, the Arctic circle, the two tropics, and the ecliptic are the only circles represented.

1730. Doppelmayr: Nuremberg.—A reduced plan engraved in copperplate for the *Historische Nachricht von den Nürnbergischen Mathematicis und Kunstlern;* Nuremberg, 1730, folio. The selection of the meridian of the Canaries as Zero and the numbering of the equator are the work of Doppelmayr. The legends are placed around the map, some being omitted.

1778. Murr.—A full-size plan of the original, containing the Western Hemisphere given by Christ. Theoph. von Murr in his *Diplomatic History of Martin Behaim*, published in German at Nuremberg in 1778 and at Gotha in 1801. A French translation was published at Paris in 1787 and at Strasbourg. Another edition was issued at Paris in 1802.

another cartographical document of the same period: the famous planisphere of Fra Mauro of 1459, which cannot

The legends are given both in French and German in the French translation. 1801. Murr.—A copy of the last, reduced to half-size, given by the publisher of Amoretti's *Pigafetta*, Paris, 1801, with a reproduction of Murr's work in the appendix.

1842. Ghillany.—A plan of the Western Hemisphere drawn by Heidedoff for Ghillany's Memoir on the Globes of Behaim and of Schoner, published in German at Nuremberg, 1842.

1847. Müller, J.—The globe in the Paris National Library. It is a so-called facsimile reproduction of the original constructed by the order of Jomard, the keeper of the Map Department of the National Library in Paris, and executed by a very skilful artist named Jean Müller. A report published in the *Bulletin de la Société de Géographie de Paris* for March 1876 vouches for the correctness of this reproduction. It offers, nevertheless, sufficiently considerable variations from the copy published by Ghillany in 1853, which also comes from Müller. Several of the inscriptions are already difficult of deciphering. The positions in the Western Hemisphere appear to be more to the east than in the original. (Wagner).

1853. Ghillany: Nuremberg.—A copy in two hemispheres of the facsimile drawn by Jean Müller for the Paris National Library, and published by Ghillany in his *Geschichte des Seefahrers Ritter Martin Behaim*. Ghillany has copied from the globe itself all the legends and inscriptions still readable, and has transferred them to Muller's drawing. The two plates are printed in colours; this work is the most beautiful and best known of the reproductions of the globe. Wagner, who has compared it with the original, says all the positions are too much to the east. I have discovered numerous differences between this reproduction and the globe in the National Library at Paris.

1854. Jomard: Paris.—A copy of a map representing the globe, in the possession of the Behaim family, and published by Jomard in his *Monuments de la Géographie*, 2 sheets. I have ascertained it varies considerably from the globe in the Paris National Library. The legends are fewer and briefer.

1857. Lelewel: Brussels.—A reduced reproduction of Doppelmayr's with modifications drawn from other reproductions, notably Murr's. It is Plate X. of his Atlas in his *Géographie du Moyen Age*.

have been unknown to the cosmographers and navigators of Portugal, and consequently to Columbus, since it had

1874. V. de Saint-Martin: Paris. — A reduced reproduction o Jomard's. In the Atlas of Saint-Martin's *Histoire de la Géographie.*

1879. H. Kiepert: Berlin.—A reproduction made for educational purposes, not placed on the market (Wagner). It is provided with meridians and parallels.

1879. Mayer.—*Hilfsmittel der Schiffahrtskunde.* . . . Vienna, 8vo. A reproduction after Doppelmayr.

1881. Ruge.—An excellent and handsome reduction after Müller's copy, drawn by Opitz, and published by Ruge in his *Geschichte des Zeitalter der Endeckungen*, Berlin, 1881.

1889. Nordenskiold: London.—A reduced reproduction of Doppelmayr's. No. 40 of Nordenskiold's *Facsimile Atlas.*

1890. Gunther.—A reduction of Ruge's, published in Gunther's *Martin Behaim*, Bamberg, 1890, in 12mo.

1892. Kretschmer.—A slightly modified reproduction of Ruge's, published in Kretschmer's *Die Entdeckung Amerikas*, Berlin, 1892.

1892. Fiske.—A reduced reproduction on Mercator's projection. Published in his *Discovery of America*, vol. I., p. 422, Boston.

1892. National Museum of the United States, Washington.—A reproduction of the globe in the French National Library, executed under the supervision of the author of this book at the expense of the United States National Museum, for exhibition at the Chicago Exposition in honour of the Fourth Centenary of Columbus. It is now in the National Museum at Washington. This reproduction is absolutely identical with the Paris globe both as regards size and design, including the iron bracing and brass circles noticeable thereon, and bears the same inscriptions. The globe alone, without the designs, but with the bracing cost 400 francs. The drawings with their legends, the work of a marine painter, M. Gigot de Grandpré, cost 1600 francs. Some of the legends being no longer decipherable have been restored from the texts given by Ghillany.

The conditions under which this work was carried out give reason to believe it will long endure. Within a very few years it may remain the only serviceable specimen of this famous globe, for both the original and its replica at Paris are rapidly deteriorating.

In its general outlines, and also in the large number of geographical

been completed from documents furnished by the Portuguese, and a reproduction had been set up, at great expense, for King Alfonso.

One portion of this map dealing with the East might appear to have been made for the purpose of accompanying the letter to Martins. That, it is true, can be explained by the fact that Fra Mauro necessarily drew from the same source as the author of the letter, viz., from Marco Polo's account; nevertheless, there are points of resemblance between the documents that warrant the belief a direct loan was made from the work of the Camaldolese monk. On Fra Mauro's map all the north-east of China bears the name of *Chataio*, and indicates the imperial city of *Chambalech* (Yule's Cambaluc). On the coast appears *Chansay*, with a legend to the effect that its circumference is 100 miles, and that it has 12,000 bridges. Lower down,

notions which its quaint legends have preserved, this sphere is justly considered to be an expression of the views held concerning the terrestrial globe on the eve of the discovery of America. But this is true only in a certain sense. Neither in its general conception nor in a number of its details is the globe of Behaim the work of a learned cosmographer. It is the expression of a false geographical system, the system of Marinus of Tyre, which no scholar could have adopted after the very peremptory demonstration of its fundamental errors made by Ptolemy. Moreover, Behaim shows us the Cape de Verde Islands, the Canaries, and, above all, the Azores at so vastly exaggerated a distance from the western shores of the Old World, that one is driven to ask how a man who passed for a learned cosmographer, and who pretended to have made voyages in the Atlantic, could have so set them down. In 1493 the exact bearings of the Atlantic Islands were perfectly well known, particularly by the Portuguese; yet Behaim, who actually lived on Fayal, one of the Azores, places this island at 50 degrees from Lisbon! From this striking blunder one may imagine the further errors in detail that would be discovered were the globe subjected to a close examination.

inland, is the inscription in large characters, *Regno Magno*, followed by the information that this province includes 12,000 towns. Eastward the coast takes the shape of a vast peninsula bearing the name of *Regno de Zaiton*, and on the bay dividing this peninsula from the continuation of the Asiatic coast is the legend *Magnifico porto de Zaiton;* while at the very foot of the bay is marked *Zaiton.* East from the peninsula, but at what does not appear to be a great distance from the coast, lies the famous island of Cipangu, together with a number of other isles which are unnamed.

IV.—THE CATALAN MAP.—Among other maps, which the author of the letter and Columbus cannot but have known and utilised, must be mentioned the Catalan map of 1375, a map belonging to a school much in favour throughout the Iberian peninsula. At the N.E. occurs the inscription *Catayo*, and lower down the name of the capital: *Civitas de Chambalech magni canis Catayo*, as also the names of *Cansay* and *Zaiton;* to the southward are represented numerous isles. Were we to suppose that the map of the letter to Martins was a general map of the world, or even of a whole hemisphere, it would be necessary to add many other documents to those just mentioned; but no grounds exist for making such a supposition. The map which accompanied the letter to Martins had no other purpose than to illustrate that letter, if we may so express ourselves; that is to say, it was intended to make clearer the explanations there given as to the possibility of reaching the Indies by sailing to the west. We may therefore set about reconstructing this map without having recourse

to any other sources of information than those mentioned in the present chapter and in the chapter on the origin of the cosmographical notions of Columbus. There may have been others used, but these will suffice, especially when we can add some explanation or information borrowed from the writings of Columbus himself, from members of his family, or from his apologist Las Casas.

V. — THE PROJECTION OF THE MAP. — It has been asked whether the so-called Toscanelli map was composed of equal degrees or converging meridians. M. D'Avezac has maintained the latter opinion against Signor Uzielli, who, on this point, appears to be in the right. The author of the letter to Martins says himself that the map is a sea-chart, and Las Casas who has had it under his eyes similarly describes it, assuring us furthermore that Columbus steered his course by this map which he and Pinzón frequently consulted. There can therefore be no doubt as to its being a sea-chart, and there is no reason to suppose it differed from other sea-charts of the period.

But it is necessary to make an important observation here. In 1474, the date inscribed on the letter to Martins, sea-charts — otherwise called Portolani — were constructed on the lines of the Mariner's Card, that is to say, they pointed out the direction to be followed not by means of a scale of latitudes and longitudes, but according to the different airs into which the winds were divided. In other words, they were not graduated, but were simply provided with a scale of distances generally hidden away in a corner. The map mentioned in the letter to Martins was not a chart of this kind. It was a graduated chart; the

passage bearing on the longitudinal and transversal lines indicating the distances, both east and west and north and south, is altogether conclusive on this point. Consequently one of two things must follow. Either this map is the first and the only one it occurred to any one to construct on this method at the period indicated by the date, 1474, or it was constructed at a later date, when the use of the square projection, with lines cutting one another at right angles, had been adopted in the making of sea-charts. There is no need to hesitate in choosing between these alternatives. Just as the author of the letter to Martins unwittingly betrayed the forgery he committed, by mentioning therein facts that could not have been known in 1474, so has he imprudently allowed it to be seen that his map could not date from that period by attributing to it a characteristic which is only to be found in more recent maps. With Uzielli and Hermann Wagner we suppose the map made to accompany the letter to Martins was on a plane projection, graduated, whose meridians and parallels intersected at right angles; but we do not believe that such a map could have been thus designed at the date attributed to this document.

VI.—THE DIVISION INTO SPACES.—According to the letter to Martins, the map which accompanied this letter only represented that portion of the globe comprised between the western and eastern shores of the Old World. From Lisbon to Quinsay, at the two opposing extremities of this expanse, were reckoned 26 spaces of 250 miles each, which is equivalent, says the letter, to about one-third of the circumference of the globe. The entire map, recon-

structed on these data, would therefore comprise 78 spaces (three times 26) of 250 miles each, or a total of 19,500 miles. But did the author of the letter wish to say that this maritime expanse was mathematically equal to one-third of the circumference of the globe? We must presume not, because to a cartographer, particularly if that cartographer were so eminent a geometrician as Toscanelli, each of these spaces must correspond with a determined number of degrees whose sum should be the 360 degrees of the circumference of the globe. Now 78 spaces cannot be multiplied by any figure that will exactly give this result.

We are therefore entitled to believe that the sphere of this cartographer comprised a number of spaces, more or less than 78, whose multiplication by the number of degrees contained within each should give a total of 360 degrees. The number 72 when multiplied by 5 gives exactly this result. Ximenes had suggested the probability of this being the division made by Toscanelli; but this suggestion, which nothing then warranted, and which Humboldt considered arbitrary,[173] has not been accepted. It would, however, appear to be justified to-day, for those at least who believe this map to be the work of Toscanelli, by the already mentioned discovery made in the Florentine Library of the outline of a map, also attributed to Toscanelli, forming the sketch of a graphic representation of one half of the sphere, divided into 36 spaces each of 5 degrees, which, for the whole sphere, gives exactly the 360 degrees of the globe's circumference. If this sketch is Toscanelli's

[173] Ximenes—*Gnomone Fiorentino*, pp. xcii.-xciv. *Examen critique*, vol. I., p. 238, note.

—and, although Herr H. Wagner doubts it, it may well be admitted to be his—the Florentine geometrician for an entire map only reckoned 72 spaces in place of 78, and it is highly probable he employed the same division in constructing the map sent to Martins in the first instance and afterwards to Columbus, always provided that the map did really come from him.

But it is not necessary to have recourse to this hypothesis in order to show that the spaces on our map could only be composed of 5 degrees each. This division becomes necessary inasmuch as Marinus of Tyre, whose system was adopted by the author of the letter and by Columbus, reckoned there were only 135 degrees within the unknown space separating the two extremities of the Continent, a space cosmographers, and Columbus in particular, thought themselves justified in further reducing owing to the discoveries made towards the far East subsequently to the time of Marinus of Tyre. Thus Behaim, who held the same opinions, gives only 130 degrees to this space. It may be said that Martellus (1489-93), Ruysch (1507), and the author of the globe of Laon (1490), have done the same; the last even further reduces this space. These are all, it is true, posterior to the date of the letter to Martins; but we think we have shown that the date of that letter is false, and that neither the letter nor the map could have been drafted before the discovery of America. It follows from this that, if the 26 spaces the author of the letter reckons from Lisbon to Quinsay comprised either more or less than 130 degrees, they would no longer represent the exact distance these authors, after the system they followed, were compelled to reckon between these two

towns. For example, if each space contained but 4 degrees Lisbon would only be divided from Quinsay by 104 degrees, and would thus not only no longer agree with the system of Marinus of Tyre, but would also be in disagreement with the very terms of the letter, which states that the maritime space between the two extremities of the world is about equal to a third of the sphere.

This division into spaces has nevertheless appeared unusual, and Kretschmer has ventured the opinion that it is a measure arbitrarily selected by Toscanelli, the value of which he has not given, thus making it illusive.[174] But Herr H. Wagner has shown that in Toscanelli's time many maps, prepared simply after the fashion of the Mariner's Card, were furnished with a scale subdivided into intervals or spaces, the larger consisting of 50 miles and the smaller of 10 miles.[175]

The spaces mentioned in the letter to Martins were not therefore an arbitrary geographical item, nor yet a standard of measurement belonging specially to the Florentine astronomer; moreover, the letter speaks of spaces as though the meaning were quite understood. It is evident, as Wagner remarks, that Toscanelli—or whoever was the author of the letter—would have given some explanation of the word *spatium* had he not thought it sufficiently clear; if, for instance, it had not signified 50 miles or a multiple of 50. Our author's silence on this point proves again that what was then known by a mile was everywhere the same.

[174] *Die Entdeckung Amerikas*, Berlin, 1892, p. 235.

[175] *Die Rekonstruktion der Toscanelli-Karte*, p. 223.

VII.—TOSCANELLI'S DEGREE.—Admitting the point that the so-called Toscanelli sphere comprised 72 spaces of five degrees each, it remains to find out what was the distance enclosed in each space, or, in other words, what was the measurement of the degree of Toscanelli or of the author of the map. Each space is of 250 miles, says the letter to Martins, that is to say, the degree consists of 50 miles. In thus expressing himself the maker of the map could only have been thinking of a parallel north of the Tropic of Cancer, for it is of the distance between Lisbon and Quinsay that he speaks. But this does not give us the size of the cartographer's equatorial degree, that is to say, of his fundamental measure. This measure has been sought in various ways. D'Avezac, moved chiefly by mathematical reasons, finds it in Ptolemy's degree of 500 stadia equal to 62½ miles.[176] Herr S. Ruge is also of this opinion. Other standards have been proposed. The one that has attracted most attention, and which Signor Uzielli has adopted, is that of 67⅔ miles to the degree. This Toscanelli himself is thought by some to have indicated; in fact, on one of the folios of the manuscript on the comet, already mentioned[177], has been found, as we have said, a note in Toscanelli's handwriting to the effect that the degree equals 67⅔ miles, that the mile consists of 3000 cubits, the cubit of 2 palms, and the palm of 12 ells 7 inches.

VIII.—THE STANDARD OF 67⅔ MILES TO THE DEGREE.—If this note reveals the standard used by

[176] *Les Voyages de Vespuce et les mesures itinéraires*, etc., Paris, 1858, p. 135; and *Toscanelli*, No. 1, January 1893, p. 8, col. 2.

[177] See § Bibliography.

Toscanelli, or whoever was the author of the map, it gives to the degree 67⅔ miles on the equator and only 50 miles on the parallel of Lisbon. Although in truth there is not so great a difference in the length of the degrees in these two latitudes, we may accept that the cartographer so calculated them. Furthermore we necessarily conclude, for reasons which will shortly be stated, that the mile he used was the ordinary Roman or Italian mile. Then it follows that the 50 miles the degree measures on the 40th or 41st parallel, the latitude in which Lisbon was then placed, give 74,000 metres, while the 67⅔ equatorial miles give 100,146⅔ metres, say a difference of 26,146 metres in each degree. This is a great deal. Nevertheless, according to the calculations of the learned authors of the basis of the metric system,[178] the degree along the equator measures 111,277.5 metres and along the 40th parallel 85,357.7, say a difference of 25,920 metres, which, with a margin of about 226 metres, correspond with the figures attributed to Toscanelli. We are therefore in a position to say, if the author of the map used the 67⅔ miles standard, and the mile he employed was the ordinary Roman or Italian mile, that he gives 26,640,000 metres to the circumference of the globe along the 40th parallel, and 36,052,799¾ metres along the equator.

This manner of solving the problem is not devoid of difficulty. There is no proof that the author of the map used the standard of 67⅔ miles to the degree; there is indeed no other reason for making this supposition than the fact that Toscanelli mentions this standard in a note

[178] See Sonnet: *Dictionnaire des Mathématiques appliquées*, Paris, Hachette, 1895, p. 361.

which has no connection either with the letter to Martins or with the sketch in which is thought to be seen the outline of a map similar to the one it is supposed accompanied the letter to Martins. If the scale 67½ miles had been in vogue at the date of this letter, one could understand its being selected, as a scale was required; but this measure was completely unknown to the authors of Toscanelli's day, and to most of those who preceded or followed him. Herr Wagner declares he has never once met with it throughout his cosmographical researches, and that not a single modern author, among those who have handled this question, has mentioned it. He even goes so far as to say that it is a measure foreign to the science of geography into which Signor Uzielli seeks arbitrarily to introduce it.[179] Although Toscanelli has taken the trouble to explain how this measure is made up, and although Signor Uzielli,[180] Signor D'Albertis,[181] and M. L. Hugues[182] have all three accepted it after long and minute examination, we are of opinion that Herr Hermann Wagner is undoubtedly right, and that it cannot be taken into consideration. Yet, if Toscanelli be indeed the author of this map, how are we to believe, when his object was to furnish King Alfonso V with information about the route he proposed, which any one could understand, that he made use of a measure unknown to cosmographers, a measure Signor Uzielli himself admits

[179] Wagner: *loc. cit.*, pp. 261-262.

[180] *La Vita e i Tempi di Paolo dal Pozzo Toscanelli*, vol. V. of the *Raccolta Colombiana.*

[181] *La costruzioni navali e l'arte della navigazione al tempo di Cristoforo Colombo*, in the *Raccolta*, Part. IV.

[182] *L'Opera scientifica di Cris. Colombo*, Turin, 1893.

was a purely local one in Florence.[183] To have done so would have been as strange as though he had described his distances in miles differing from those ordinarily in use among seamen.

IX.—THE STANDARD OF 66⅔ MILES TO THE DEGREE. —Hermann Wagner, who has devoted very deep study to these questions, suggests that the standard of the maker of the map—for him it is Toscanelli—must have been one of 66⅔ miles to the degree. This supposition does not raise the same objections as the former. The scale of 66⅔ miles to the degree, which is the same as 16⅔ leagues, was a recognised measure. Vespuccio approved it,[184] Enciso, Vaz Dourado, and others employed it, as Herr Wagner has shown;[185] and, when in 1524 it was a question, at Badajoz, of determining the situation of the boundary line, one of the important questions discussed was whether to replace the usual calculations of 15 or 16⅔ leagues to the degree by the 17½ leagues standard affected by the Portuguese, in order, said the Spanish delegates, to enclose a larger extent of territory within the same degree.[186] Let us remark that if at Badajoz—after the quarrels raised by the Papal line of demarcation—the Portuguese had an

[183] *Loc. cit.*, p. 461.

[184] Letter of 18th July 1500; Bandini, p. 72.

[185] *Loc. cit.*, p. 260.

[186] On this point, see the discussion between Varnhagen and D'Avezac as to the bearing of the league to the degree, and particularly the Memoir before cited, pp. 138, 145, and 147. See also: *Parecer de los astrónomos y pilotos españoles de la Junta de Badajos sobre la demarcación y propiedad de las islas del Maluco*, in Navarrete: *Viages*, vol. IV., No. XXXVII., pp. 343 *et seq.*

interest in lengthening the terrestrial degree, it was not so in 1474.

It is therefore possible the author of the letter to Martins may have made use of the standard of $16\frac{2}{3}$ leagues to the degree. Viewed in this light, Toscanelli's map would give to the circumference of the earth a lesser extent than follows the application of the $67\frac{2}{3}$ miles to the degree standard: 24,000 Roman or Italian miles, or 35,520,000 metres instead of 36,052,799¾ metres. Similarly the circumference along the parallel of Lisbon would be reduced to 18,000 miles or 26,640,000 metres: it of course being understood that Toscanelli's mile is taken to be the Roman or ordinary Italian mile, equal, in round figures, to 1480 metres; for if, with Signor Uzielli, we admit his mile to have been the Florentine, which is reckoned at $1653\frac{1}{2}$ metres, the circumference in both cases will be considerably increased, as may be seen in the annexed table.[187]

X.—THE STANDARD OF $62\frac{1}{2}$ MILES TO THE DEGREE.—This was Ptolemy's standard, which, as has been said before (note 83), gave to each degree 500 stadia, of which it took 8 to make an Italian mile, thus giving $62\frac{1}{2}$ miles or $15\frac{5}{8}$ leagues to the degree. D'Avezac believed that the author of the map had calculated in this manner, and the authority Ptolemy then enjoyed gives some weight to this opinion. If it be admitted, the globe at the equator would measure 180,000 stadia, or 22,500 miles, say 33,300,000 metres. But no other reason exists, beyond the one just mentioned, for thinking that the author of the map reckoned in this manner. For those who think the author was

[187] Appendix I.; see also, Wagner, *loc. cit.*

Toscanelli this is the standard to accept; and we venture to think it is permissible to say the chief reason why Signor Uzielli discards it in favour of the 67⅔ miles standard is that he found it did not square with his theory, namely, that Toscanelli knew the true dimensions of the globe. This may be true of Toscanelli; but it is not so with regard to the author of the map.

XI.—THE STANDARD OF 56⅔ MILES TO THE DEGREE. —This was Alfragan's standard; Columbus adopted it and makes frequent mention of it, as we have shown in notes 87, 89, and 93. If, as we think we have also demonstrated, the letter to Martins merely expresses Columbus' cosmographical ideas, then the standard used by the author of the map to which this letter is explanatory can only have been that of 56⅔ miles. For, after taking from Columbus his fundamental idea as to the small maritime expanse separating the two extremities of the Old World—an idea Columbus himself had borrowed from Marinus of Tyre as he had found it expressed in *Ptolemy* and in the *Imago Mundi*—we cannot suppose the author of the letter and the map would have discarded the very measure of the degree by which Columbus explains the second fundamental base of his system: the smallness of the globe. We have therefore an excellent reason for believing that the degrees of each of the spaces on the so-called map of Toscanelli severally measured 56⅔ miles at the equator, making a total of 20,400 miles or 30,192,000 metres, thus giving to the globe nearly three millions of metres less than Ptolemy, who had himself also considerably diminished it. (Ptolemy reckons 33,300,000 against Faye's 40,007,520.) It is well

to remark here that if the mean parallel along which the compiler of the map reckons 50 miles to the degree—which parallel we designate as the parallel of Lisbon—was the 34th, the equatorial degree of the compiler would contain just 60 miles, which, in practice, was exactly Columbus' method of counting. Let us further add that in the time of Columbus the latitude of Lisbon, as well as other points along the coast, was far from being exactly determined.

XII.—TOSCANELLI'S MILE.—Let us now consider the reasons which lead to the belief that the mile on the map in question was, as stated above, the Roman or ordinary Italian mile. The fact alone that the map is a nautical one, as the letter states, and that the explanations with which it is accompanied are, as the letter also conveys, of a nature to be understood at the first glance, is enough to justify the conclusion that the author of this letter has made use of terms and measures in general use. Had it been otherwise he would have explained his terms and defined his measures; he would have stated what it was necessary to understand by his spaces and to what standard his mile referred. Signor Uzielli, himself, acknowledges the justness of this observation. "It is evident," he says, "that when Toscanelli speaks of miles in his letter of 1474 he means to refer to the mile in usage among sailors."[188] Later, in his great work on the Florentine astronomer, published by the Colombiana Commission in 1894, he further explains and accentuates this opinion by saying: "The marine mile, indefinite like the others, was the only one Toscanelli could employ when writing to Lisbon on

[188] *Toscanelli*, No. 1, 1893, p. 10.

the subject of a sea-voyage." Further on he adds: "Evidently Toscanelli, in writing to Martins, could not take as the unit for the itinerary the mile of 67⅔ to the degree, this being an absolutely local Florentine measure—*assolutamente locale fiorentina*—and he must have chosen one of those more generally employed at the period as a marine measure.[189]

Now, the navigator's mile was the Roman or ordinary Italian mile, of which it took four to make a league. Every one is agreed on this point. The Italians, who were always in considerable numbers in the Portuguese service, had spread this system of reckoning since the Thirteenth Century, and Columbus knew no other.[190] The equivalent of this mile in modern measurement has not been rigorously established; but the margin among the several valuations proposed is insignificant. Some give 1481 metres, others 1477½, and it has even been reduced to 1472.5 metres (Littré). Let us, with Herr Wagner, take it, in round figures, at 1480 metres. The Roman or ordinary Italian mile of 1480 metres, 4 of which go to a league, is therefore what we shall consider as the mile of the so-called Toscanelli map.

Signor Uzielli, whose opinion is very weighty in such matters, nevertheless considers the mile of the great geometrician to have been the Florentine mile, which, by his own showing, was a local measure, and, in any case, was not the one whereby seamen reckoned their distances. We see at once whither this leads us. If the

[189] *Vita e i Tempi di . . . Toscanelli*, pp. 460-461.

[190] See the Journal of Columbus, 3rd August 1492, and Navarrete's note: *Viages*, vol. I., pp. 3-4.

author of the map used the Florentine mile, each of his degrees was of 111,927 metres, and he gave to the great circumference of the earth 40,293,720 metres (Uzielli). That is to say, his degree was 795 metres larger than Mr Faye's, and thereby he enlarges the circumference of the earth by nearly 300,000 metres.[191] It is difficult to accept this view, which would appear to have been formed under the influence of the preconceived idea that Toscanelli had obtained a very nearly accurate notion of the real size of the earth. How, scientifically, could he have obtained this notion? What data had he for that purpose other than what came from the ancients? The knowledge of the dimensions of the earth is not to be obtained by subjective processes; it is deduced from facts, observations, and actual measurements; it is an objective attainment. Let us further remark, and it is not without importance in this case, that if the map had been constructed on the scale of the Florentine mile Columbus would have used a scale different from the one of the very map which, according to Las Casas, served as his chart, because it is certain Columbus reckoned his distances by the ordinary Italian mile of 4 to the league. Columbus also maintained that the world was smaller than was thought,[192] whereas Toscanelli would have shown just the opposite if he had reckoned his distances by the Florentine mile. Finally, Las Casas tells us Toscanelli gave to Cipangu "2400 miles circumference, say 600 leagues,"[193]

[191] See Signor Uzielli's attempt to reconstruct the map of Toscanelli in his *Toscanelli* of the *Raccolta*.

[192] Letter from Jamaica of the 7th July 1503, in Navarrete, *Viages*, p. 300. See above: First Part, note 92.

[193] *História*, vol. I., p. 360.

which again refers to the ordinary Italian mile. It seems these considerations leave no room for doubting that the map mentioned by Las Casas as coming from Toscanelli was to the scale of the Roman or Italian mile of 1480 metres, and that, consequently, far from augmenting the volume of the earth, the author of this map diminished its circumference by several millions of metres.

XIII.—TOSCANELLI'S GLOBE. — For the author of the letter to Martins, who ignored the existence of a Continent placed between the western and eastern extremities of the Old World, the distinction between the Atlantic and Pacific was unknown. His globe consisted of only two divisions, the one terrestrial, the other aqueous, of unequal dimensions. The first was twice as broad as the second, and, as the western limits were well known, it was on the eastern side that Toscanelli prolonged them. In reality one reckons—in round figures—from the western shores of the Iberian peninsula (8 degrees west of Greenwich) to the eastern shores of Chinese Asia (122 degrees east of Greenwich) 130 degrees by the direct overland route to the East, whereas by the opposite route, which necessitates making the circuit of two-thirds of the globe, there must consequently be 230 degrees. In the cosmography of the pseudo-Toscanelli exactly the reverse proposition is stated. From the coasts of Portugal—Lisbon—to those of eastern Asia—Quinsay—there are, going westward, 130 degrees (26 spaces), and consequently 230 degrees (46 spaces) by the other way. His Eastern Asia therefore encroaches on the Pacific to the extent of about 100 degrees and almost reaches the western shores of America, so that his Quinsay

was only 20 degrees west of California, and his Cipangu stretched in part over the American Continent itself.

XIV.—THE GEOGRAPHICAL CONCEPTION REPRESENTED BY THE SO-CALLED TOSCANELLI MAP BELONGED TO MARINUS OF TYRE.—This geographical arrangement, which consisted in widely expanding the solid mass of the globe while correspondingly diminishing the liquid portion, forms the fundamental characteristic of the cosmography of the author of the letter to Martins and of the map which was its complement. To this conception the attention of Alfonso V is directed; it is the idea that is supposed to have struck Columbus, and it is the one—no matter whence it came—in which many will persist in seeing the determining cause of the discovery of America. If Columbus, it is contended, had not been persuaded that the world was smaller than it was supposed to be, and that Asia was more easily accessible by the west than by the east, either he would never have undertaken the journey, or, had he done so, he would never have succeeded in persuading any one that his scheme was feasible. The idea that Asia was divided from the Iberian peninsula by a not very considerable extent of maritime space was, nevertheless, not a new one. The ancients, as we have already shown,[194] had many times expressed it; but no one had sought to represent it cartographically, or, if they did so, their efforts have not reached us. Wagner, who has made very exhaustive researches on this point, has not found a single cartographical document of a date earlier than the so-called Toscanelli map, where the idea repre-

[194] See First Part, chap. iii.

sented by this map is expressed; and we are not aware that any one else has been more fortunate, although several documents of this kind exist which are subsequent to this date, the best known of which is the celebrated globe of Behaim. Whether or not efforts were made to graphically represent this ancient conception, certain cosmographers had given on this subject information which may be expressed in numerical values. Thus we have seen that Posidonius gave to the Atlantic, on the parallel of Athens, the same breadth as to the habitable world, say 70,000 stadia out of the 140,000 which, under his system,[195] this parallel contained. Again, later, we have seen that Marinus of Tyre, who, like Posidonius, gives the globe a circumference of 180,000 stadia, extends the length of the habitable world to 225 meridians out of 360, so that the interval separating the two extremities of the ancient world was reduced to about one-third of the total circumference, say 135 degrees.[196] This view did not, however, make headway; and that of Ptolemy, who returned to the system of Posidonius by reducing the inhabited world to half the sphere, or 180 degrees, on the great circle, gained such authority that no one any longer thought of that of Marinus of Tyre. The author of the letter to Martins has merely revived this ancient opinion which had been justly condemned by Ptolemy and justly forgotten. To within about 5 degrees, the 26 spaces this

[195] See above: First Part, chap. iii., section 9: *Origin of the Hypothesis as to the possibility of a passage to India by the West*, and notes 68 and 74. See also, *Posidonius* in *Strabo*, Book II., chap. iii., sect. 6.

[196] See above: First Part, chap. iii., sect. 10, and notes 76 and 77; see also, *Marinus of Tyre* in *Ptolemy*, Book I., chaps. xi.-xiii.

author reckons from west of Lisbon correspond exactly to the 135 degrees Marinus of Tyre counts for the same distance, and it must further be observed that by some interpretations of the text Marinus extended the known world to the 230th degree east of his first degree, which left exactly 130 degrees to the west.[197]

This old opinion was, in the Fifteenth Century, a novelty that would be welcomed by those whom many other considerations predisposed to believe in the possibility of great discoveries towards the west. But, although it may have been of service to science if it really did contribute towards determining the calling of Columbus, it was radically erroneous; and far from finding evidence of the far-sightedness of Toscanelli in the supposition that he re-adopted this exploded fallacy, we should rather see conclusive proof that a man of his attainments could not have fallen into such an error.

XV.—TOSCANELLI'S ISLANDS: ANTILIA.—In its maritime expanse of 130 degrees the map indicates some islands; this is evident from a formal assertion by Las Casas to that effect, and from the phrase in the letter wherein the author himself speaks of the merchants living in the islands, and says he has marked on the map the harbours where the navigators may bring-to should bad weather or other circumstances require it; but he only names two of these islands: Antilia and Cipangu.

The situation of Antilia is not indicated; but the author of the letter writes to his imaginary correspondent that it is known to him. This famous island which

[197] See above: notes 76 and 77.

occupies so considerable a place in the Atlantic geography of the Middle Ages is, in fact, marked on a certain number of the Portolani of the Fifteenth Century. After the best known, those of Bianco (1436), of Pareto (1455), and of Benincasa (1482), it is situated at a distance from Lisbon that may be reckoned from 30 to 35 degrees; on Behaim's globe it is placed further to the west, being located some 50 degrees from Lisbon.[198] Peschel, in his reconstruction of Toscanelli's map, places Antilia about the 45th degree from Lisbon. As we take it for granted that Columbus' geography is the same as that of the writer of the letter to Martins, and as we know by Las Casas that Columbus had noted that the old sea-charts placed Antilia about 200 leagues west of the Azores,[199] we ought rather to be guided by this information, which does not allow us to set back this island so far to the westward as do Peschel, Kretschmer, and even Wagner.

One may reckon on an average 10 degrees—200 leagues—from the Azores to the Canaries, and 8 degrees—160

[198] The different copies we possess of this globe do not all give the same position to Antilia. On the reproduction in Jomard's Atlas, it is about 60 degrees west of the meridian of Lisbon and sinks away to the south, being placed close to the equator, where it occupies the position of San Brandan, which disappears altogether. On the globe itself it is, according to Wagner, at 10 spaces—50 degrees—from Lisbon, and also at 10 spaces from the eastern coast of Cipangu. Ghillany similarly locates it. Peschel and Kretschmer push it 5 degrees towards the east. Ruge reckons 10 spaces between Antilia and the Iberian coast; but with him the value of each space was of 4 degrees. As regards its parallel all the reproductions, except Jomard's, place it pretty nearly in the same latitude, viz., about the height of the upper portion of Cipangu, that is to say, close to the Tropic of Cancer. It is so situated on the original globe (Wagner).

[199] Las Casas: *História*, vol. I., p. 99.

leagues—from the Canaries to the meridian of Lisbon, that is 18 degrees, or 360 leagues in all. If Antilia were but 10 degrees, or 200 leagues, from the Azores, we should have to place it about the 28th meridian from Lisbon; but as Columbus says at more than 200 leagues, an expression which can only mean at not much more than 200 leagues, we are entitled to believe that after the information he had gathered Antilia was to be found at some degrees beyond the 28th meridian of Lisbon, which accords with what we learn from the Portolani. Seeking now from these data where Antilia ought to be placed on the map of the author of the letter to Martins, we shall find it should be in the 8th or 9th of the 26 spaces, because, like Columbus, he only reckoned 15 leagues to the degree, or 75 leagues for each space of 5 degrees: in the 8th, if the island were only 200 leagues from the Azores, that is to say, at 400 leagues from the Canaries, and at 560 from Lisbon, a distance which fixes us at the 38th meridian of the map; in the 9th space if it were more than 200 leagues from the Azores.

XVI.—CIPANGU.—Cipangu, says the author of the letter to Martins, is at 10 spaces (or 50 degrees) beyond Antilia. The position of Antilia being, as we have just seen, only approximatively ascertainable, it follows that that of Cipangu also cannot be located with certainty. We refer, of course, to the situation the author of the letter and Columbus assign to that island, and not to its actual position, which is known to us since we are aware that it was Japan. If we put Antilia in the 8th space, under the 38th meridian of the author of the map, or at

560 leagues from Lisbon, Cipangu must be located just beyond the 18th of the 26 spaces, and it should consequently be found 750 leagues westward of Antilia. If to these 750 leagues we add the 200 leagues separating this island from the Azores, then the 200 leagues between this group and the Canaries, and finally the 160 leagues lying between the Canaries and Lisbon, we shall find Cipangu, according to the author of the letter to Martins, was at least 950 leagues from the Azores, 1150 leagues from the Canaries, and 1310 leagues from Lisbon. That is to say, it was to be sought after the 87th meridian west of Lisbon, in the chart scaled 15 leagues to the degree which accompanied this letter, corresponding to the 65th degree on a map scaled 20 leagues to the degree,[200] which, neglecting the minutes and seconds, gives us the 75th degree west of Greenwich. Let us now see where Columbus thought to find Cipangu. According to his son he had told his crew they must not expect to find it before making 750 leagues —3000 miles—westward of the Canaries.[201] This was 400 leagues less than he should have said according to the information given in the letter to Martins. But Columbus, who had an interest in hiding from his crew the great distance they had to go, and who in fact did not reveal to them the real distances sailed each day, may well have said 750 instead of 1150 leagues. In effect we find that neither on the 2nd October, a day when his *Diario* shows they had sailed 746 leagues, nor the 3rd, 4th, and 5th, three days when they made an additional 167 leagues, thus far outstepping the 750 leagues of which he had

[200] $87 \times 15 = 1305$ leagues. $65 \times 20 = 1300$ leagues.

[201] *Historie*, chap. xxi.

spoken, does he say one word about Cipangu. It is only on the 6th October, at the close of which they had covered 953 leagues, that his *Diario* mentions Cipangu for the first time. It is just a mere reference, but it suffices to show that Columbus and also Pinzón were thinking of that island. On 13th October, the morrow of the discovery of Guanahani, after covering 1123 leagues, or 4492 miles, since leaving the Canaries, Columbus thinks he is close to Cipangu and devotes himself to searching for it.[202] At this time, according to the information given by the letter to Martins, he was, in fact, only 27 leagues from that famous island.

The following days were spent in sailing from island to island in the hope of discovering the one for which they searched. On the 21st, during his short stay on Saometo Island (probably Crooked Island), the Indians told Columbus of a large island called *Colba* or *Cuba*, and gave him such a description of it that he felt sure this time he was right: Cuba must be Cipangu; he will go there at once.[203] On the 23rd he repeats that Cuba is Cipangu. On the 24th he sets sail for it, and says that the globes and world-maps he has consulted show this island to be in this position.[204]

We do not know to what globes and world-maps Columbus makes allusion. If there then existed globes and maps which represented Cipangu at eleven or twelve hundred leagues west of the Canaries they have dis-

[202] *Columbus' Journal;* Markham's edition, p. 40.

[203] *Ibid.*, p. 55.

[204] *Ibid.*, p. 57.

appeared.[205] After all, the matter is of no great importance; but what is important is that Columbus sought for Cipangu in the very longitude where, according to the information furnished by the letter to Martins, it was to be found, viz., after having sailed 1123 leagues westward of the Canaries.

Columbus did not persist in the belief that Cuba was Cipangu, but he continued to search for it among the Antilles, and finally concluded it must be Hispaniola.[206]

[205] Cipangu was only known to the West through Marco Polo, who places it 1500 miles from the coast (Yule, vol. II., p. 235), say 375 leagues, which on the basis of 15 leagues to the degree, Columbus' standard, carries us 25 degrees eastward from the Asiatic shore, or 105 degrees westward of Lisbon, since Columbus only allows 130 degrees to the maritime expanse lying to the west of the Old World. On Fra Mauro's map Cipangu is shown nearer to the coast. On the globe of Behaim it is only 20 degrees distant (Jomard, Ghillany, Ruge, Schrader). We have just shown Columbus thought it was still further from the coast.

[206] Columbus appears to have changed his opinion about the identity of Cuba with Cipangu during the month of November 1492. On the 28th November he discovered Cuba; he then expresses the opinion that it is an island ten days' journey from the mainland, and thinks the ships of the Great Khan come as far as it; but he speaks no more of Cipangu. He has evidently decided Cuba is not Cipangu, which he will continue to seek, but always in the same region. For more than a month nothing more is heard of Cipangu. On the 24th December he reverts to the subject by recording in his book that an Indian of Hayti gives the name of Civao to Cipangu (Markham, p. 131). On the 26th he repeats this statement. On the 29th he appears to think Civao (one of the provinces of Hayti) is itself an island. From this moment the Log-book is silent about Cipangu; but from his son we learn that at the last it was Hayti Columbus took for Cipangu (*Historie*, chap. xx.). Columbus himself confirms this in the first lines of his Will drawn up in 1498; and from a legend on Ruysch's map of 1507 we see that even at so late a period the belief existed that Hayti was Cipangu. It should be observed that on the map of Bartholomew Columbus, discovered by Wieser, a

It is therefore established that Columbus thought he had found Cipangu in the very region where the letter to Martins said it was to be found, and, consequently, it is just beyond the 18th space of the map which had accompanied that letter we must locate this famous isle.

As regards the latitude in which Antilia and Cipangu were situated, the language of the letter lends itself to two interpretations. In speaking of the distance separating the land of spices from Lisbon, going directly to the west, the author gives the impression that he places these islands on the parallel of Lisbon, and it is in this sense Humboldt has understood his language; but in another passage he speaks of the islands from which one should set out to make the crossing, a reference that can only apply to the Canaries. According to this latter view, which is the one adopted by nearly all the cartographers who have sought to reconstruct the map in question, Antilia and Cipangu should be placed somewhere between the 25th and 30th parallels. As for Cipangu this is unquestionable; it is impossible to locate this island more to the north: but such is not the case with Antilia which, on all the Portolani whereon it is represented, is placed

map which joins Asia to South America, and whose first leaf represents the maritime expanse between the western extremities of the Old World and its eastern boundaries, Cipangu does not appear at all, while Espagnola (Hayti) fills the place it should occupy according to the information contained in the letter to Martins. Let it be further noted that when Columbus stopped at Lisbon, on his return from his first voyage, Ruy de Pina wrote that he had come back from the discovery of Cipangu. It is therefore well established Columbus thought he had found Cipangu at the very spot where the letter to Martins, and consequently the map which had accompanied it, declared it to be.

much more to the northward, corresponding approximately to the latitude of Cape St Vincent. Behaim alone places it near the Tropic of Cancer.

XVII.—OTHER ISLANDS.—Antilia and Cipangu are certainly not the only islands that must have figured on such a map as we are seeking to reconstruct. The letter to Martins does not mention any others, it is true, towards the west. But Las Casas who has had the map before him says that Toscanelli had marked innumerable islands around Cipangu.[207]

The compiler of the Catalan map has done the same thing, adding thereto a legend wherein he states that in the sea of the Indies, above Trapobane, there are 7548 islands, abounding in fine stones and precious metals. The globe of Behaim conveys similar information; while Fra Mauro's planisphere also shows a multitude of islands. Columbus believed in their existence. He annotates the passage wherein Marco Polo speaks of the numerous islands which exist in the Indian Sea, as also the passage in d'Ailly's *Compendium cosmographie*, chap. ix.,[208] where they are again mentioned. On the 14th November, being off the northern shores of Cuba, whence he perceived a vast number of islets called *Cayos*, he does not hesitate to say they are the innumerable islands the world-maps represent at the furthest confines of the East. We may therefore put forward that the map of the letter to Martins indicated, in the region where it placed Cipangu, a great number of other islands. Perhaps also

[207] *História*, vol. I., pp. 116-117.

[208] *Postille al libro di Marco Polo*, note 345, vol. II. of the *Scritti*

it represented the famous island of Saint Brandan which then figured on all maps; but we have nothing to prove this supposition.

XVIII.—THE ASIATIC COAST.—So far we have been able to show that the information conveyed by the letter to Martins agrees fully with the cosmographical views held by Columbus. But with regard to the Asiatic coast this agreement is not so clearly apparent. Having recognised that, according to Columbus himself, Cipangu ought to be found after the 18th of the 26 spaces of the map, the Asiatic coast ought necessarily to be found 8 spaces further off. But as Cipangu was an island of considerable extent—Toscanelli gives it a circumference of 600 leagues—it was at least 10 degrees in breadth, which pretty nearly corresponds with the dimensions given to it on the globe of Behaim. The western shore of this island would be, in this case, six spaces from the Asiatic mainland, that is 30 degrees, or 450 leagues, if, like Columbus, we calculate 15 leagues to the degree. But then how comes it that when Columbus found himself off the coasts of Cuba and Hayti, which successively he took to be Cipangu, he thought he was quite near to the mainland? How can this belief, so well established by the Log-book of Columbus,[209] be reconciled with the undoubted fact that the letter

in the *Raccolta*. The edition of the Venetian traveller thus annotated—the Latin edition of 1486—mentions only 1378 islands, and this is the figure Columbus adopts. The texts of Marco Polo published by the *Société de Géographie de Paris*, by Pauthier, and the one Yule has translated give 12,700 islands (see Yule, vol. II., p. 417, and note 6). The passage in d'Ailly's *Compendium cosmographie* annotated by Columbus—note 662—gives also 1378 islands.

[209] On the 21st October 1492, less than ten days after the discovery

to Martins is the faithful expression of his own geographical and cosmographical ideas? We have here a serious difficulty, though it may not be impossible to remove it. If the letter to Martins was written before Columbus' views were definitely fixed as to the distance of the isles he had discovered from the Asiatic coast, and as to the actual situation of that coast itself, we can well understand there may be some divergence between the opinions expressed in the *Diario* of 1492 and those con-

of Guanahani and before that of Cuba, Columbus imagines he is near the dominions of the Great Khan, and says he announced his intention of proceeding to Quinsay to hand that potentate the letter the Catholic kings have commissioned him to bear him (Markham, *loc. cit.*, p. 55). On the 28th he expresses the opinion that the Asiatic coast is ten days from Cuba. On the 30th he persuades himself that the Indians of that island are at war with the subjects of the Great Khan (*ibid.*, p. 63), and says he will use every effort to reach Cathay, where that prince resides, and which cannot be far distant (*ibid.*, p. 63). The 1st November he reckons he is 100 leagues from Zaiton and Quinsay. Next day, however, he takes his bearings and finds he has made 1142 leagues since leaving the Canaries (*ibid.*, p. 66). At this time Columbus had not even passed the 75th meridian west of Greenwich. On the 11th December, after the discovery of Hayti, he calculates, and this time correctly, that the mainland, which he always thinks is Asia, lies to the southward of that island. This mainland, which he was to discover on his third voyage, was the South American Continent, but even then he did not perceive his error.

We cannot in this note follow the different phases of Columbus' thought that he had discovered the extreme Eastern shores of Asia. Several times he changed his opinion on the places to which should be applied the names of Cipangu and all the others mentioned by Marco Polo; for, in lands inhabited by a primitive people, he failed to recognise the rich countries extolled by the Venetian explorer; but he never doubted that he had reached the regions where those countries were to be found, and during his four voyages he never ceased from searching for them.

tained in the letter which we have shown was written at a later period.

If there be one fact well established to-day, although it has been contested even by Mr Harrisse, who might well have left this fancy to M. Roselly de Lorgues, it is that when Columbus died he had not yet realised the true character of his discoveries, and that he never knew he had twice landed on a continent which lay between the Antilles and Asia. A conclusive proof of this double assertion is to be found in the map of Bartholomew Columbus, already mentioned,[210] the first leaf of which shows the Eastern shore of Asia at a much greater distance from Cipangu, represented by Hispaniola (Hayti),

[210] *The Map of Bartholomew Columbus*, 1506.—See note 98. It is known that just after Columbus died, even possibly in 1506 itself, Bartholomew Columbus betook himself to Rome, and there he left a description and a map of the coast of Veragua which with his brother he had explored during the latter's last voyage. These documents found their way into the Alexander Strozzi Collection, and thence, at a later date, into the Florentine National Library. The description by Bartholomew was known, and Mr Harrisse published it in his *Biblioteca Americana;* but the map was lost. But on a copy of the letter from Jamaica of the 7th July 1503, in which Columbus gives an account of his fourth voyage and mentions the map he had drawn up to accompany his account, a copy also forming part of the Strozzi Collection, Wieser discovered three pen sketches representing all the Equatorial Zone of the Globe, intended to illustrate the discoveries of Columbus, and particularly those of his fourth voyage.

The collection wherein this precious document was found and the critical examination to which it has been subjected do not permit us to doubt it comes from Bartholomew Columbus himself, and that we have here the authentic expression of the cosmographical ideas of the two brothers, after their latest discoveries. This is the opinion of Wieser who has published a facsimile of these sketches accompanied by an interesting study; it is also the opinion of all those who have

than appears to be warranted by the language used by Columbus in his *Diario*. We may therefore maintain the conclusion to which our analysis has led us, and leave the Asiatic coast of the letter to Martins at 30 degrees from Hayti, the Cipangu of Columbus. To the Asiatic coast we give the outline it has in the map of Bartholomew Columbus, an outline which projects itself less forward than on the globe of Behaim, and we insert on it the four names mentioned in the letter: Cathay, Mangi, Quinsay, and Zaiton; names borrowed from Marco Polo, and which also appear in the planisphere of Fra Mauro.

XIX.—THE WESTERN COAST.—For drawing the other extremity of the map we have only very vague information. The letter says it shows "your coasts," an expression which cannot be taken as referring only to Portugal, since it is followed by "the isles whence you should set

examined the documents. The first of the three sketches represents all the maritime expanse lying between the extreme Eastern and Western shores of the Old World, and the Asiatic coast is depicted as running continuously into the coast of Central and Southern America. This maritime expanse, in the midst of which appear the Antilles, but not Cipangu, whose place is evidently taken by Hispaniola, which Columbus, at the last, took to be the Japanese island, measures exactly 130 degrees from Cape St. Vincent to the Cattigara of Ptolemy. The third sketch bears the legend we have reproduced in note 98, indicating that, contrary to Ptolemy's opinion, Columbus thought Marinus of Tyre was right in assigning to the Old World a continental extension of 225 degrees.

After examining this map it is difficult to understand how it is possible to maintain the opinion that Columbus realised he had discovered a New World, which was not the Indies. See on all these points the previously mentioned memoir by Wieser.

forth" evidently a reference to the Canaries. The Spanish version adds a reference to Ireland and Guinea as forming the two ends of the coast included in the map. As Columbus was well acquainted with the African coast starting from Cape Bogador, we may leave on our map the names that are found on the map of Bartholomew Columbus.

XX.—RÉSUMÉ: THE SO-CALLED TOSCANELLI MAP COULD TEACH NOTHING TO THE PORTUGUESE.—After the example of several critics we have just attempted a summary reconstruction of the map mentioned in the letter to Martins, which letter it is supposed to have accompanied. We have been guided in this reconstruction principally by the very terms of the letter to which the map served as complement, and of which, consequently, it was the graphic expression. We may therefore take for certain that this map did not differ greatly from what we have supposed it to have been. Whether Toscanelli was its author or not, the preceding critical examination can leave no doubt as to the real character and scientific value of the document. It was a map by which it was proposed to show the possibility, or rather the facility, of the journey to the Indies by way of the west. The author makes this demonstration by graphically rendering the ideas, frequently emitted by the ancients, as to the small extent of maritime space dividing the two extremities of the known world, and those ideas peculiar to Marinus of Tyre as to the eastward extension of the Asiatic Continent.

To these two fundamental features, which give to the map its essential character, the author added some geo-

graphical nomenclature, borrowed from Marco Polo, and indicated some islands whose existence was then a matter of belief, and which figure on several maps of the Fourteenth and Fifteenth Centuries. It may be affirmed that this is all that was contained in the work attributed to Toscanelli.

This simple statement suggests the following reflection: this famous map, which was supposed to come from an intellectual and scientific centre in possession of the fullest and latest information on all the geographical and cosmographical questions then discussed; a map stated to be the work of one of the most learned men of his day, who was particularly careful to be well posted in all these questions, is constructed, nevertheless, on facts known to everybody, and even long known to everybody: for those which constitute its basis date back to far antiquity, and those which are the most recent are lifted bodily from a work that was already a hundred and fifty years old.

Yet a second reflection comes also to the mind: it is that any cosmographer, no matter how little learned, could easily have prepared such a map; and in Portugal particularly, where Prince Henry had developed the taste for geographical studies, men capable of such a labour were to be found in plenty.

We may well then ask what light such a document could throw on the question of the better route to reach the Indies—a question, by the way, not yet raised in 1474—and what this map, in which was to be found no new information or suggestion for those who occupied themselves with cosmography and navigation, could teach seamen, like the Portuguese, who knew the Atlantic better than any one, and to whom no Portolano of the period was unknown,

for it was by the help of these Portolani that Prince Henry directed his explorations!

We thus find ourselves led, by another line of thought, to ask once more the question as to the authenticity of all this correspondence between Toscanelli and Canon Martins in the first instance, and afterwards with Columbus, the improbability, at least, of which is demonstrated by so many other considerations. To these considerations, which have been developed in the preceding pages, a new motive for suspicion must now be added: the complete insignificance and absolute want of originality of the famous map to which has been attributed so large a share in the genesis of the ideas which led Columbus to his great discovery.

CHAPTER II

COLUMBUS' ROAD-MAP

WE come now to the second question: Was the map we have just described in its broad outlines the one that served to guide Columbus on his first voyage?

I.—A MAP EXISTED WHICH LAS CASAS THOUGHT WAS TOSCANELLI'S.—Las Casas is very affirmative on this point. He says that he has had in his possession the map which accompanied the letter to Martins;[211] that Columbus was entirely guided by it, and had such faith in the information it conveyed as never to doubt the success of his enterprise.[212] The fact that the author of the letter to Martins

[211] After speaking of the consultation between Pinzón and Columbus on the 25th September, Las Casas says: "This map is the one that was sent by Paulo, physician of Florence. It is the very same that I have in my possession with other objects belonging to the Admiral who discovered these Indies, as also writings from his own hand, which were confided to me (*y escrituras de su misma mano que trajeron à mi poder*), *História*, Book I., chap. xxxviii., vol. I., pp. 278-279.

[212] "Columbus had such faith in the letter sent and in the nautical map which the said Paulo, physician, had sent him, that he did not doubt he should find those lands that were marked upon it" (Las Casas: *História*, Book I., chap xliii., vol I., p. 316).

refers to this map proves, moreover, that it was part of his plan to produce it, for he would not otherwise have spoken of it: one may even add it was necessary in order to give weight to what he puts forth. If he mentions it, refers to it, and lays stress on the information it contains, he does so because it suits him, because it is necessary for the object he has in hand. This appears to be clear and beyond the possibility of discussion. We may therefore take it for certain that a map, attributed to Toscanelli, really existed, appears to have accompanied the letter to Martins, and came into Las Casas' hands: this does not, however, prove that it was Toscanelli's work nor that it served Columbus as his road-map.

II.—WAS THE SO-CALLED TOSCANELLI MAP THE ROAD-MAP OF COLUMBUS.—If, therefore, we follow Las Casas, there can be no doubt that the map he tells us accompanied Toscanelli's letters is also the one Columbus used as a road-map. Muñoz, who was well acquainted with the then unpublished work of the Bishop of Chiapas, is among the first to put forward this fact;[213] Humboldt at the beginning was of the same opinion;[214] but later on he corrected himself, and, while admitting Columbus had Toscanelli's map on board, thought the great navigator did not solely guide his ship by it, because, instead of holding to the parallel of Lisbon, he laid his course off the island of Gomera.[215] This reason, which Mr Harrisse also gives,[216] would prove, on the contrary, it was indeed the map of

[213] *História*, Book III., § 4.
[214] *Examen critique*, vol. I., p. 233.
[215] *Cosmos*, vol. II., p. 317.
[216] *The Discovery*, p. 401.

which Las Casas speaks, the one he attributes to Toscanelli that served Columbus as a road-map; for, while speaking of the distance separating Lisbon from Quinsay in the straight line, the letter to Martins recommends another line as the one to be taken for crossing the ocean, namely, the one which starts from the isles, a phrase that can only mean the Canaries. Columbus, therefore, whatever may have been his motives, did, in fact, comply with the instructions given in the letter to Martins in waiting to lay a course westward until he was off the Canaries.

But other reasons exist for doubting that the road-map of Columbus was the one mentioned by Las Casas. Before considering them, let us recall that, besides the authors just mentioned, Sprengel, Navarrete, Washington Irving, Bossi, Tarducci, and Fiske all think Columbus in making his discovery followed the instructions he found in the letter to Martins and in the map which accompanied that letter. Sir Clements R. Markham, K.C.B., the learned President of the Hakluyt Society, calls this letter, "The Sailing Directions of Columbus" (*The Journal of Christopher Columbus*, London, 1893, p. 11 *et seq.*).

III.—COLUMBUS DOES NOT SAY HIS ROAD-MAP WAS TOSCANELLI'S.—Las Casas is a little more definite in explaining the origin of the map than he is with the letter. He says clearly, as we have just seen, it was sent to Columbus by Toscanelli; that he, Las Casas, had had it in his hands, with other writings of the Admiral, and that Columbus never doubted he should find the lands marked on it. Before evidence so positive and precise it would be necessary unhesitatingly to admit that the map we are

discussing really served Columbus as his road-map, if certain reasons did not exist for supposing Las Casas was ill-informed, and if, particularly as regards the map, we had not, by chance, another source of information which does not agree with his: the very Log-book itself of Columbus. It is well known that it is only through Las Casas we are acquainted with the Log-book of Columbus' first voyage. The Bishop of Chiapas made a very extensive and detailed analysis of all that it contained from the original manuscript itself, which is now unfortunately lost; in this analysis he follows the text date by date, and frequently reproduces the very words of Columbus. It is this summary, entirely written in Las Casas' hand, which constitutes what is known as the Journal or Diary of Columbus, and which has been published and translated several times. In writing his *História generál de las Indias* Las Casas has also made use of the original manuscript of the Diary of Columbus, sometimes reproducing numerous passages textually, at others contenting himself with analysing them. This History of the Indies being now published, we possess two accounts of certain incidents which, though drawn from the same source and written by the same person, are not altogether identical as regards all the details. In his *História* Las Casas records that on the 25th September 1492 Columbus and Pinzón consulted the map by which they were sailing, and were surprised not to seet he islands it marked at the spot where they then were. "This map," adds Las Casas, "was the one Paul the physician had sent and which I have in my possession."[217] If now we refer to the Diary of Columbus itself, the extracts from which

[217] Las Casas: *História*, Book I., chap. xxxviii., vol. I., p. 278.

are very much more copious than in the *História*, and do not appear to have been drafted by Las Casas at the same period as he wrote his *História*, we see Columbus mentions, on this same day, the 25th September, the map consulted that date as though it had been made by him.[218] Thus Columbus, who here is speaking himself, and whose language is only put in the third person by Las Casas in order to shorten the statement, not only does not say the map was Toscanelli's—though now, surely if ever, was the occasion to mention that fact—but gives it to be understood that it was he, Columbus, who had designed it! We cannot admit here the possibility of an error on the part of Columbus. It was in 1552, at the earliest, that is forty-six years after the death of the discoverer, and about sixty years after the famous consultation of the 25th September

[218] Here is the phrase on which this assertion is based: "*Una carta . . . donde según parece tenia pintadas el almirante ciertas islas*" (Navarrete, *Col. Viages*, vol. I., p. 13). This phrase is somewhat ambiguous; but the meaning we give to it is the one accepted by the most competent authorities in such matters. M. de la Roquette has rendered it, "Sur laquelle il parait qu'il (l'amiral) avait representé certaines iles." (*Relations des quatre voyages*, etc., vol. II., p. 26). Mr Harrisse says: "On which the Admiral seemed to have painted certain islands" (*The Discovery*, p. 401). Navarrete, in the note he has appended in this place to the Journal of Columbus, which he was the first to publish, has also understood the phrase in this manner: "*Esta carta delineada por el almirante*," etc. (*Col. Viages*, vol. I., p. 13, note). Sir C. Markham gives a neutral translation: "On which, as it would appear, the Admiral had certain islands depicted" (*The Journal*, etc., p. 28). Señor G. de la Rosa, to whom I submitted this text, is nevertheless of opinion it should be translated as follows: "A map . . . of the Admiral wherein, as it would appear, were found depicted certain islands," which may be taken to mean that the map merely belonged to the Admiral. But, even giving them no more than this restricted sense, these words show clearly that the map in question was not Toscanelli's.

1492, that Las Casas affirms the map thus consulted came from Toscanelli, while Columbus, who kept his Log-book from day to day aboard his ship, employs therein language on this very date in September 1492, which, far from confirming the statement of Las Casas, gives it to be understood he was himself the author of the map in question. If, with Las Casas, we wish to believe this map really came from Toscanelli, we must admit Columbus has concealed the fact; for, under the circumstances mentioned, his silence, on so essential a point, can only have been deliberate; and, as we cannot see why he should hide a fact of this kind, which could not be damaging to him, we are entitled to consider the reserve he has here shown on this point as a very convincing proof that such was not the case. There are still other proofs to the same effect, as we shall shortly see.

IV.—THE ROAD-MAP OF COLUMBUS DENOTED ISLANDS WHICH COULD NOT BE KNOWN TO TOSCANELLI.—We have just said Columbus does not express himself in a manner that would lead to the inference he was guided by a map which came from Toscanelli. We shall now show this map contained information which Columbus looked on as certain, and which could not by any possibility have come from Toscanelli.

If we refer again to the Log-book of the great navigator we shall find that from the 17th September the little squadron he commanded thought land was near. They had then scarcely passed the most westerly meridian of the Azores. On the 18th this belief continues. The 19th Columbus, no doubt wishing to know exactly where they were, took his bearings and found they were only 400

leagues from the Canaries.[219] The 22nd or the 23rd—the Diary is not very clear on this point[220]—when they had gone some 100 leagues further, Martín Alonso Pinzón, the ablest of Columbus' lieutenants, sent to ask him for his map, the same which Las Casas declares was Toscanelli's. It may be supposed Pinzón wished to assure himself, by a fresh inspection of this map, that they were really in the neighbourhood of some land. On the 25th, Columbus and Pinzón confer together about this map, or rather about some islands marked thereon. Pinzón asserts that the caravels were, at that moment, in the position where the map indicated islands, and Columbus expressed himself as being of the same opinion. Columbus was so sure of it that he tried to explain the islands were probably not seen because the currents had swept the caravels out of the course, and because the pilots in taking bearings had miscalculated, as the squadron could not have made all the way they reported. To satisfy himself, he again asks Pinzón to give him the map, which is passed to him by means of a cord, when he began to take his bearings on it with his pilot and some of the sailors.[221]

Therefore, the map Columbus and Pinzón studied with such care from the 19th to the 25th September; the map by which evidently they were steering, since they passed and repassed it to one another at critical moments; the map Las Casas says came from Toscanelli; marked the situation of certain islands which Columbus, and perhaps also Pinzón, thought they should certainly find at

[219] Navarrete: *Col. Viages*, pp. 10-11.

[220] Navarrete: *Col. Viages*, p. 12.

[221] Navarrete: *Col. Viages*, pp. 13-14.

the spot where they were indicated. This fact, even in the absence of any other reasons, would suffice to raise a doubt as to Las Casas' assertion that this map had been sent by Toscanelli, first to Martins and afterwards to Columbus.

For, in effect, without mentioning the language of Columbus, which does not confirm Las Casas' assertion, but rather contradicts it, we cannot explain the certainty Columbus had as to the existence of islands at the spot he and Pinzón sought for them on the 25th September 1492, namely, in mid-ocean about 30° latitude and 47° or 48° longitude, unless he had other information on this subject than a map constructed by a Florentine scholar who had never left his study. Such a map might well indicate some isles in the Atlantic, like Antilia and San Brandan, for instance, in whose existence everybody then believed; but it is impossible to see in information of this nature a sufficient reason for giving Columbus the certainty to which his Diary bears witness, that islands existed in the latitudes his flotilla had reached on the above-mentioned date. Let us take note that this assurance was not shaken in Columbus because he did not find the islands in question, for on the 3rd October he enters in his Log that he has left them behind him, and did not sight them only because he would not lose time looking for them when his main object was to reach the Indies.[222]

The information given by this map concerning these islands came therefore from a source Columbus considered very sure; so sure, according to Las Casas, that as we have

[222] Navarrete: *Col. Viages*, p. 16.

already shown, he never doubted the ultimate success of his expedition. Since a learned map constructed by a theorist, like Toscanelli, could not give a certainty of this character, we are entitled to see here a confirmation of the doubt raised by the very language of Columbus respecting the origin of this map, and to say that in this circumstance lies another reason for believing the map consulted by Columbus and Pinzón on the 25th September did not come from Toscanelli.

Let us complete this demonstration by another most significant remark.

According to the letter to Martins, and, consequently, according to the map of Toscanelli, the maritime expanse to be crossed to reach the Indies was of 26 spaces or 130 degrees. Cipangu and the isles by which it was surrounded, if we follow Las Casas, were about 8 or 6 spaces, 30 or 40 degrees, less to the west, say after the 18th space west of Lisbon. Columbus, if he were steering by Toscanelli's map, could not therefore expect to sight land before having sailed this distance. Now we have already seen that as early as the 19th September, when the squadron had not gone more than 400 leagues westward of the Canaries, Columbus expected to find land. On the 25th he was very disappointed not to meet with the islands marked on his map, and he sets to work to re-check his calculations in order to find if he has not made some error in them. On the same date, at night, Pinzón, thinking he spies land, cries the news to Columbus, who falls on his knees to thank God, and all the crew join in singing the *Gloria in Excelsis Deo*.[223] Columbus therefore thought he

[223] Navarrete: *Col. Viages*, p. 14.

had attained his end. At that moment his flotilla was only 12 or 14 degrees west of the meridian of Flores. It was therefore not by Toscanelli's map, nor by any information obtained from that scholar, that Columbus was steering, but evidently by a map indicating islands in the region attained by the discoverers on the afore-mentioned date; a map Columbus may have drawn himself, but only from information supplied by others, for he had never before been further west than the Azores.[224]

V.—THE ROAD-MAP OF COLUMBUS WAS BASED ON INFORMATION HE HAD RECEIVED FROM A PILOT.—If the information afforded by the map, consulted on the 25th September, respecting the situation of certain islands in

[224] On this subject yet another observation remains to be made. It is that, from the moment he was disappointed in his hope of finding the islands where he expected to sight them, Columbus appears to have hesitated as to the course he should follow, and on several occasions altered it. Up to the 20th September he had consistently followed the parallel on which he had started, that of Gomera, viz., the 28th. On the 21st, thinking he was near the islands he sought, he bore to the north, and held on this course for a couple of days. On the 24th he resumed a westerly direction. On the 25th, being about the 29th or 30th parallel, after realising that the islands marked on his map did not exist, and having taken his bearings in order to find out why he had not sighted them, towards evening he veered again and bore away south-west. On the 26th he again took to the west and kept this course for several days. The 6th October Pinzón urges that the course be altered to southward; Columbus at first resists, but next day he accepts this advice, and seven days later he landed on the island of Guanahani, which is generally held to be Watling Island. It is therefore clear, whatever conclusions may be drawn from the fact, that, until he reached the neighbourhood in which he expected to find the islands, Columbus followed without either deviation or hesitation a direct course, but from the moment he realised no islands were there he began to sail at haphazard.

the neighbourhood of the 30th parallel of latitude, did not come from Toscanelli, whence did it come? Evidently not from Columbus himself, since he had never before ventured so far. Reasoning may have led him to conclude that by sailing directly westward the shores of Asia would at length be reached; but no amount of theoretical speculation could have led him to the certainty that islands, hitherto unknown, existed at some well-defined spot in the Atlantic; and yet we know he had this certainty. Whence, therefore, did it come? To answer this question, or at least to offer some reasonable explanation of the point it raises, we must here pause in order to take a retrospective view of some facts already mentioned. In a former chapter we have shown that, on the morrow of the discovery of the New World, the report spread, even among the companions of Columbus, that his good fortune was entirely due to a pilot who had by chance landed on one of the Antilles, and who had taken the bearings of the island so as to mark it on a chart which, according to the story, appears to have been constructed with the help of Columbus himself, to whom the pilot in the hour of death had revealed his secret. We have traced this story to its sources, and we think we have shown, contrary to the view taken by most modern authors who have treated the subject somewhat too superficially, that the tradition respecting the pilot, who is said to have informed Columbus, rests on very serious data; that Columbus' own companions believed it; and that there exist no good grounds for considering it to be apocryphal.[225]

[225] See chapter v. of the First Part for the value and historical importance of this tradition.

these conclusions are justified, and if the material t contained in the tradition be true, viz., that there existed pilot who, returning from an adventurous voyage in the tlantic, gave Columbus information as to one or more lands he had, or thought he had, discovered; if this nformation were set down on a chart which came to olumbus, or which he may even have helped to prepare —and all these facts seem vouched for—we are compelled to draw the conclusions logically arising therefrom: viz., that we have here a group of circumstances which explain in a simple and natural manner the certainty Columbus and Pinzón felt as to the existence and position of the islands they sought on the 25th September 1492; and it is difficult to believe that the map they had under their eyes was other than the one tradition said Columbus either obtained from the pilot, or constructed under his supervision. If this supposition be well founded—and it is difficult to think otherwise when the circumstances we have just recalled corroborate it so clearly—the map in which Las Casas says Columbus placed absolute confidence; the map whereby the pilots of the memorable voyage of 1492 steered; the map which has always been thought Toscanelli's, because Las Casas says so, and the *Historie* repeats the statement after him; this famous map did not come from the learned Florentine, but from, at least in one of its essentials, the unnamed pilot whom tradition points out as being the instructor of Columbus on the route he should take to reach the islands which were thought to be those of the Indies.

This is, evidently, a bold conjecture, the logical basis for which is the difficulty of otherwise explaining the

[illegible] islands actually existed where [illegible] admit these islands [illegible] coming from Tos- [illegible] Columbus and Pinzon [illegible] Toscanelli came by such [illegible] speaking of this [illegible] Toscanelli [illegible] author, but, on [illegible] constructed it him- [illegible] is made of this map [illegible] seems to have been to [illegible] these islands. We may also [illegible] Columbus appears to have [illegible] islands, and to have been [illegible] the map on which they were [illegible] the event of [illegible] Toscanelli's, whereas we can easily under- [illegible] family of pilots, [illegible] almost exclusively by [illegible] the nameless pilot. [illegible] were this not the [illegible] suppose that a know- [illegible] the reasons which led the [illegible] to embark [illegible] Columbus [illegible]

[illegible] PINZON [illegible] HAVE POSSESSED THE SAME [illegible] COLUMBUS.—It is well to call the [illegible] attention to this last observation, as it may [illegible] some explanation of the independent attitude [illegible] assumed towards Columbus.

[illegible] ell known it was thanks to the help given to

the great navigator by this pilot and his family that the memorable voyage of 1492 was rendered possible; and as we have just seen Columbus consulted with him on critical occasions. Later on Columbus, yielding to Pinzón's advice, changed the squadron's course in favour of the one he recommended. Still later again this pilot left Columbus in order to search by himself for the lands that were the object of the voyage, and in the end he tried to get back to Palos before the discoverer himself. Finally, we find Charles V ennobling the Pinzón family as a reward for the distinguished services the head thereof, this very Martín Alonzo Pinzón, had rendered in the 1492 expedition.

All this tends to show this individual was something more than a mere pilot, such as Juan de La Cosa, for instance, who was nevertheless Columbus' own pilot, and owned the caravel on which he had embarked. The Admiral treated Pinzón differently from the others; he handed him the road-map and discussed it with him; he took his advice, not merely on technical points, but on what constituted the very object of the expedition; that is to say, the position where they expected to find the islands of which they were in quest, and on the course to steer to find them, in which latter respect we know that Pinzón made his views prevail.

Would matters have so passed unless Pinzón possessed the same information as Columbus and thought himself as well entitled as the Admiral to interpret it? If Columbus were only guided by information of a theoretical character, arising either from his studies and scientific documents or obtained from Toscanelli, why did he consult with a sailor who only possessed practical knowledge? And if the part

played by Pinzón in the great undertaking were only that of a simple subordinate, who followed the course commanded by his leader, why should the emperor grant an exceptional honour to his family based at least in part on the rôle he had played in the discovery of Hispaniola.[226] Let us further remark that what is said of the feelings of envy and jealousy Pinzón entertained towards Columbus, and the silly tale that he died from the remorse he suffered for his conduct towards the Admiral, come from Las Casas,[227] that is to say, from the man on whom falls the responsibility of producing the false letters of Toscanelli while taking care to conceal the source whence he had obtained them.

We leave the reader to draw his own conclusions from a judicious study of these facts.

VII.—THE SO-CALLED TOSCANELLI MAP WAS NOT THE ROAD-MAP OF COLUMBUS.—We may therefore henceforth take the following proposition to be sufficiently established.

The road-map of Columbus could not have come from Toscanelli. It was above everything a map giving practical information, due, apparently, to the pilot who either discovered or thought he had discovered one of the Antilles, and had taken Columbus into his confidence.

[226] The deed is dated the 23rd September 1519; it is given by Navarrete, *Viages*, vol. III., pp. 145-146. The services rendered by this distinguished family are therein enumerated, and special mention is made of the voyage of 1492, of the discovery of Hayti and of other islands . . . . *en descubrimiento de la isla Española* y en otras islas. . . .

[227] See the *Historie*, fol. 84; and Las Casas, vol. I., p. 469.

Are we then to suppose that two maps existed: the one, mentioned by Las Casas and by him attributed to Toscanelli, a theoretical map constructed on scientific data; the other, the one that served as road-map to Columbus, a practical map drafted from the information obtained from pilots? It would seem so. The existence of a map which served as Columbus' road-map cannot be called in question. It is true we do not know exactly what this map was, since it has disappeared and no one has described it; but as has been shown we have, nevertheless, good reasons to believe it existed. The same is true of the other, the map Las Casas declares was Toscanelli's. But, if we cannot contest the material fact of the existence of a document a man like him avers he saw and had in his possession, it is not so with regard to his assertion that it was this document which served as road-map to Columbus. In this he surely errs, for if the so-called Toscanelli map is apocryphal it is necessarily of later date than the first voyage of Columbus, and could not, consequently, have served as road-map on that voyage. Nor can it have performed this function if it is genuine, seeing that the map whereby Columbus steered his course gave indications which could not have been known to Toscanelli.

Therefore apparently there existed two different maps, one being that attributed to Toscanelli, but which did not serve as road-map to the great voyage of 1492, and the other being the one by which Columbus did really direct his course, but which was not made by Toscanelli.

It is assuredly surprising that Las Casas, who had such good means of being well acquainted with all that con-

cerned Columbus, with whose family he lived on terms of friendship, and all whose family papers were in his possession, should have so far blundered as to confound two maps so dissimilar as must have been the chart which really served Columbus as his road-map and the one Toscanelli is reputed to have made, and which was the expression of a cosmographical conception to which Columbus did not attain until after his great discoveries. But, as has already been said, this is not the only strange thing to arrest our attention in the language of Las Casas when he is speaking of Columbus. Thus, for example, it is he who knew all about Columbus, he who was at the very source of all authentic information concerning the great navigator; it is he who sends us for information about the birthplace of Columbus to the Portuguese historian, Barros, who knew absolutely nothing about him personally. This fact is worth noting as showing in Las Casas a very singular ignorance touching certain details in the life of the man whose constant panegyrist he became. Las Casas' error on this interesting point is strange, and well-nigh inexplicable, but it exists; of that there can be no doubt. The map he tells us was Toscanelli's, which he assures us was first sent to Martins and subsequently to Columbus, was certainly not the map by which the discoverer steered his way to the New World.

But may we not admit there was only one map, the one Las Casas had in his possession, the one he says served as road-map to Columbus, but which, contrary to what he also says, did not come from Toscanelli? This hypothesis is not altogether inadmissible. Nevertheless we see in it a very grave objection, one that has already

been indicated; it is that the terms in which Las Casas speaks of the map in his possession are totally inapplicable to the one which appears to have been used by Columbus, and which was a simple road-map, whereas the other was to some extent a learned map translating the cosmographical conceptions displayed in the letter to Martins, conceptions which are also identical with those held by Columbus, but which he had not yet formed when he sailed on his first voyage.

VIII.—THE SO-CALLED TOSCANELLI MAP WAS, LIKE THE LETTER TO MARTINS, APOCRYPHAL.—The motives to which may be attributed the fabrication of the letter to Martins have been explained in a preceding paragraph. It was there said that this forgery, admitting it was a forgery, might be accounted for by the desire to justify Columbus from the reproach popularly levelled at him of having found in the information supplied by a pilot, then scarcely dead, the secret of his discovery, and in order to show that, contrary to this injurious imputation, he had been guided in his great undertaking by a scientific theory to which a celebrated astronomer had given his adhesion.

If we refer to the terms in which Oviedo, Las Casas, and Gómara relate the history of the pilot who is supposed to have instructed Columbus, it will be seen that a map is mentioned which the pilot with the help of Columbus had constructed, whereon the isle or isles he had discovered and the route to reach them again were indicated. This map plays an important part in the story. Without it the anonymous pilot could have given no useful informa-

tion to Columbus; it is therefore probable, nay certain, that it is particularly to this map those persons referred who said publicly that Columbus knew nothing of him self, and that it was only through the revelations of the pilot, who took him for a confidant, that he learned the route to the Indies. If the letter to Martins is apocryphal, and if the forgery was committed for the end we have indicated, it goes without saying that the authors of the fraud had specially in view the above-mentioned map of the pilot, because on this document was based the story that was so prejudicial to Columbus. This reason explains the mention of a map in the letter to Martins, and also the concocting of that map. By affirming that the map used by Columbus on his voyage in 1492 came to him from a learned cosmographer, they destroyed all the point the discoverer's detractors gave to the story they related. Henceforth it could not be said that Columbus had borrowed the information necessary for his discovery from a map on which an obscure pilot had recorded the results of his own experience, he owed it to his own thoughts which he had submitted to a celebrated scholar who had accorded them his high sanction.

We need not repeat here the views already developed which give reason to doubt the authenticity of the letter to Martins. It is evident the same arguments which lead to the belief that the letter was apocryphal apply also to the map, which is supposed to have accompanied it, and which had the same origin and object. It would, in fact, be absurd to think that the map came from Toscanelli, while the letter, of which it was a geographical translation, did not. The mention of the map, therefore,

in the suspected letters goes for nothing in proving its genuineness. If the letter is not from Toscanelli neither is the map. In fabricating these documents the authors of the deception naturally inspired themselves with Columbus' own ideas, for this letter and map were given out to be the source whence he himself had drawn these very ideas. But it can be shown, as we think we have done, that Columbus, in whom indeed are found the cosmographical and geographical views expressed in this famous letter and its cartographical complement, only acquired them gradually, and subsequent to his great discovery; whereas, were these documents authentic, he must have formed them fifteen years earlier. This reasoning weighs heavily in the considerations which lead to the belief that neither the letter to Martins nor the map in question is authentic.

IX.—THE ROAD-MAP OF COLUMBUS SHOWED THE DISCOVERIES OF THE ANONYMOUS PILOT AND REPRESENTED THE COSMOGRAPHICAL IDEAS OF COLUMBUS.—We have admitted that if the letter to Martins is genuine so also is the map to which it refers. But in supposing that there had really ever existed a map from Toscanelli, it is certain it exercised no influence over Columbus, and that it has never served any other purpose save to exercise the critical faculty of those who have sought to reconstruct it. It is not the same, however, with the road-map of Columbus. The existence and importance of this map, which Columbus and Pinzón consulted several times between the 20th and 25th of September, on which Columbus himself sought to establish his bearings, aided

by his pilot and some of his sailors[228]—thus proving the great store he set by its information—are two points which cannot be placed in doubt.

Unfortunately we know very little about this map. We have, as we have seen, good reason to believe it represented the real or imaginary discoveries of the nameless pilot; but that is all we know. If we refer to Columbus' Log-book, written or outlined at sea during the first voyage, he had already, at that early period, acquired the conviction that he should reach the Indies by sailing directly to the west. But we are entitled to call in question the strict accuracy of the text of that Log-

[228] The gap in the researches, here indicated, definitely fixing criticism as to the authenticity of the Toscanelli-Columbus correspondence, will, I hope, be filled up by my friend Señor G. de la Rosa, who is better equipped than any one for such a work. Señor de la Rosa has on this question views which are special to himself, and which are essentially different from those expressed in this study. When he makes them known, which we hope will be at no distant date, they will cause some surprise, but they are certain to obtain all the attention due to serious criticism. While awaiting this work, the one M. Sumien has been good enough to communicate to me, and which will be found in the Appendix, will cause those to reflect who hold as proved that the letter to Martins was written by an eminent Florentine at the very period when the culture of classical literature was at its heyday in Italy. I regret I am unable to add here a note I received on this subject from Mr John B. Shipley, from whom I publish further on a letter on the same point. In this note, which he intends publishing with the explanation that it will require, Mr Shipley remarks that the Latin text of the letter to Martins contains such *Italianisms* that one is driven to ask whether, far from being the original text, it is not a translation or expansion of a text originally written in Italian. Mr Shipley has no doubt on the subject, and finds confirmation of his view in the ingenious idea he puts forward that Toscanelli's so-called second letter is an Italian letter which served as the basis for concocting the other. See Appendix F.

book in so far as Las Casas has made it known to us.

The mention in this text of the road to the Indies, of Cathay, of Cipangu, and other names which occur in the letter to Martins, can in no way be reconciled with the double demonstration that this letter is false and the pilot story is true, for from this demonstration logically follows the theory that Columbus simply sailed to the re-discovery of the lands seen by the pilot. We have full right therefore to believe that if these names are found in the original text of Columbus' Log, which Las Casas possessed and which has since completely disappeared, they were later additions placed there either by Columbus himself, after he had convinced himself he had attained the region of the Isles of the Indies, or by some other person who had an interest in seeking to establish the authenticity of the forged documents. In either case the road-map used on the voyage could have contained no information respecting the Indies; and the fact, already stated, that, after realising on the 25th September no islands existed where indicated by the map, no further use was made of that map, bears out this view. The road-map of 1492 had evidently as its principal characteristic the location of the islands and lands sought for by Columbus and Pinzón on the 25th September. If it located any other it was probably Cipangu, with which it is likely Columbus was acquainted through Marco Polo, and which he thought could not be far away from the lands or islands seen by the pilot, as we have pointed out before.

As to the other map, the one said to have accompanied the letter to Martins, we must again repeat, that whether

SUMMARY AND CONCLUSIONS

I.—SUMMING UP

WE would now sum up this lengthy study and show briefly how the question it raises stands in the light of the arguments we have adduced, and at what solution we can arrive that shall completely answer all the difficulties of the problem.

In the first place we must clearly distinguish facts which have been established from those which are only surmised or possess merely a hypothetical value. In all tasks of criticism, analysis, which is rather destructive in character, is carried out under more certain conditions that synthesis, the object of which is reconstruction. It is consequently far easier to show cause why the authenticity of the correspondence of Toscanelli with Martins and Columbus should be held in doubt than to find the motives for and the authors of the fraud that is suspected.

This having been said, let us recall that the correspondence attributed to Toscanelli bearing on the route to the Indies is composed:—Firstly, of a letter and map sent by him in 1474 to Fernam Martins, a Canon of Lisbon and confidential Councillor to King Alfonso; secondly, of a copy

of these two documents communicated by him to Columbus with an undated covering note of a few lines; and thirdly, of a letter, also undated, written by him to Columbus.

The facts already explained dealing with this correspondence and the consequences that may legitimately be drawn from them can be classified as follows:—

I.—FACTS ON WHICH RESTS THE BELIEF IN THE AUTHENTICITY OF THE DOCUMENTS.—The affirmation of Las Casas, who is the first to mention this correspondence, which he has transcribed in his *História*, begun in 1527 and finished in 1559.

The affirmation of the *Historie*, a work attributed to Ferdinand Columbus, and first published in 1571.

The existence of a copy of the letter to Martins, written upon the fly-leaf of a book which had belonged to Columbus and in a handwriting resembling his.

The fact that Duke Hercules of Este made inquiries in 1494 as to the communications Toscanelli may have had with Columbus.

The fact that the cosmographical ideas, developed in the letter to Martins, are exactly the same as those expressed by Columbus.

But these facts are not all of equal value. Thus, for instance, the double evidence of Las Casas and Ferdinand Columbus makes in fact but one. If Las Casas copied the *Historie*, which does not appear in the least likely, for he does not say so, although it was a custom with him to name his authorities, then it was from the son of Columbus the impugned documents came. If, on the contrary, and as seems very probable, it was the editor of the *Historie*

who copied Las Casas, then on him alone falls the sole responsibility for the production of these documents. In either case the affirmation of the existence of this correspondence rests upon the testimony of a single witness, which testimony nothing confirms or corroborates, but, on the contrary, everything seems to contradict.

It must also be remarked it is by no means established that the copy of the letter to Martins on the leaf of Pius II in the Colombina was actually written by Columbus. We have here only a supposition which it is impossible to prove, and which is supported by no other circumstance, whereas several very significant ones may be adduced for the opposite hypothesis: viz., the absolute silence of Columbus as to the existence of these documents; the fact that he never used or attempted to make use of them; and the difficulty there is of distinguishing his handwriting from Bartholomew's.

In any case, outside the four facts we have specified, there exists nothing, absolutely nothing, which can lead to the belief that Toscanelli was ever in correspondence either with a councillor of the King of Portugal or with Columbus, or that at any period of his life he occupied himself with the route to the Indies; whereas quite a host of circumstances can be cited which tend to show the improbability, not to say the impossibility, of the existence of such relations.

II.—FACTS WHICH TEND TO SHOW THAT THE CORRESPONDENCE ATTRIBUTED TO TOSCANELLI IS APOCRYPHAL. —The original documents—numerous enough—those left

in Italy as well as those sent to Portugal no longer exist, and no one has ever seen them.

The first of the supposed correspondents of Toscanelli, Fernam Martins, Canon of Lisbon, confidential adviser to King Alfonso, is completely unknown. He is nowhere mentioned.

Paolo, the physician, in other words Toscanelli, is also unknown to all the Portuguese of that time. He is unmentioned by any one of them or in a single Portuguese document.

The project of crossing the Atlantic, as suggested in the letter to Martins, was as unknown in Portugal as were Toscanelli or Martins themselves. Not a single Portuguese author or document of the time alludes to it.

The contemporary Italian authors, most of them either Toscanelli's friends or at least living like him in Florence, knew as little as the Portuguese about the correspondence their townsman is supposed to have had either with Martins or Columbus. None of them even knew that he took an interest in the route to the Indies, yet several of them wrote works in which a reference of this nature might naturally be expected.

Among Toscanelli's papers not a line on the subject has been discovered.

Columbus, who was very communicative; who gathered and noted down with care every scrap of information he could find bearing on the attempts at discovery made towards the west, and on the existence of new lands in that direction; has never made the remotest allusion to Toscanelli, or to the letters and map he is credited with receiving from him. He does not even appear to have

been aware that there had existed in Florence an astronomer of that name.

The Latin text of the copy which is given out as being the original text of the letter to Martins is written in very incorrect language. The errors it contains are not such as might have been made by a copyist having before him a correct text; they are the actual blunders of the writer of the letter himself.

Las Casas, who is the first to speak of this correspondence, and who first copied it, only knew it in a Spanish translation. He tells us neither how he became aware that Toscanelli had had dealings with Martins and Columbus, nor who it was that made the translation which he reproduces, nor who communicated to him this correspondence, although he does indeed let it be perceived that it came from the family of Columbus itself.

The compiler of the *Historie*, attributed to Ferdinand Columbus and published in 1571, who also reproduces these documents, in the same manner refrains from saying whence he obtained them.

In 1474, the date borne by the most important document of this correspondence, the letter to Martins, the question of the route to the East Indies which it discusses had not yet been raised. The only Indies then thought of by the Portuguese were those of Prester John (Abyssinia). It was only during the reign of Joao II, after 1481, that they began to take an interest in the route to the Indies.

The question of the spice trade with the East, also mentioned in the letter, did not exist for the Portuguese in 1474; at that time they had no motive to draw them to the Indies; this question only arose as a consequence

of their discovery of the western shores of South Africa, a discovery which led to the creation and development of quite new commercial interests.

In 1474 King Alfonso was too deeply engaged in political and military action against Castile, the crown of which country he claimed, to spare time for transatlantic discoveries. And if, by any chance, such an idea had occurred to him, it is not likely he would have applied for information thereon to a learned man who had never been outside Florence, when his own Portuguese, who were then the best sailors in the world and the only ones acquainted with the Atlantic, could have advised him better than any one.

The letter to Martins expresses the cosmographical system of Marinus of Tyre, a system only known to us through Ptolemy, who was still unprinted in 1474.

Toscanelli may indeed have known Marinus of Tyre through the manuscripts of Ptolemy; but a mathematician of his high standing would not have adopted his system, as does the writer of the letter to Martins, because Ptolemy, while describing it, points out its fundamental error which would have been patent to any learned cosmographer.

Although the geographical nomenclature of this letter, borrowed entirely from Marco Polo, had been in abeyance for a century and a half in China, the author of the letter makes Toscanelli chat with an ambassador from that country, who speaks to him as though the names mentioned by the Venitian traveller were those still in usage.

Columbus' cosmographical ideas are the same as those contained in the letter to Martins; but he gives them as

being his very own, and we know he did not obtain them from this letter; he acquired them from the *Imago Mundi*, from the relation of Marco Polo, and from Ptolemy's geography, three works printed subsequently to the date borne by the letter to Martins. We furthermore know that Columbus gave expression to the ideas found in the letter to Martins only after his last voyages.

The document announced as being a second letter from Toscanelli to Columbus differs from the first neither in substance nor, indeed, in form. We must therefore suppose that Toscanelli wrote twice to Columbus to tell him the same thing and in almost exactly the same language. The road-map of the 1492 voyage gave information as to the position of certain islands in mid-Atlantic, information which Columbus took as Gospel and which could not by any possibility have come from Toscanelli.

III.—FACTS WHICH MAY EXPLAIN THE FRAUD.—On the very morrow of the discovery of the New World it was said that the credit for that discovery was not due to Columbus, but to a pilot who had by accident landed on one of the Antilles, and who had revealed to him the route thither.

This story was widespread among Columbus' own companions, and also among those who were the first to colonise Hispaniola. Las Casas, whose curious chapter on this subject has escaped the attention of all those who have dealt with the question, bears witness to this fact and does not gainsay the tale. Belief in the story was general and lasted for a long while. From 1535 to 1552 it was revived and propagated by the publication and

reprinting of the books by Oviedo and Gómara, the latter giving the story in a form distinctly damaging to Columbus.

Above all it did harm to the heirs and successors of Columbus, to whom the Crown refused to continue the honours and extraordinary privileges granted to the great discoverer, contesting, if not indeed the discoveries, at least the importance of the personal part he had played therein. Columbus, who took pleasure in dwelling on the numerous tales of pilots he had collected, does not however say a word of this story, although it was current among his companions, who all thoroughly believed in it.

Las Casas returned from America and definitely took up his abode in Spain in 1547: this was the time when he revised and enlarged his book, which was finished in 1559. This was also the period when he obtained possession of all Columbus' papers; when, evidently, the correspondence attributed to Toscanelli was handed to him, and when also the tale of the pilot who had instructed Columbus was recalled by the publications of Oviedo and Gómara.

Here, reduced to their simplest form and without comment, are all the facts bearing on the correspondence Toscanelli is supposed to have had with Fernam Martins and Christopher Columbus. They are well vouched for, and it is on them, and on them alone, that must rest the explanations it is sought to give them.

IV.—UNLIKELIHOOD OF THE CORRESPONDENCE ATTRIBUTED TO TOSCANELLI.—From the preceding examination, which we have just summarised, one conclusion appears clearly to stand out, namely, that everything in this correspondence which Toscanelli is alleged to have carried on,

first with Fernam Martins and afterwards with Columbus, lies open to suspicion.

The circumstances under which it is pretended to have taken place; the absolute ignorance of it by all those who should have known of its existence; the inexplicable silence Columbus maintains on the subject; the total disappearance of the original documents; the mysterious source whence the translations came; the improbability that a man in Toscanelli's position should have sent to an unknown person, as Columbus then was, the copy of a document alleged to have been drafted for a king, and having, moreover, in some sort an official character; the very terms of this document in which at least two flagrant anachronisms can be detected; in which nothing indicates that it comes from a great cosmographer living at the fountainhead of all information bearing on the East; which only mentions matters then of common knowledge in Portugal; and, finally, this damning fact, that the famous letter reproduces a geographical system the falseness of which could not have escaped the notice of a man like Toscanelli, inasmuch as Ptolemy, who informs us of this system, also demonstrates that the calculations on which it is based are wrong; all these facts are bound to raise our suspicions and lead us to think we are faced by one of those frauds so common at that period, but which it is also very difficult effectively to unmask.

Can it be pleaded in this case that sometimes fact is stranger than fiction? It is conceivable, if we allow ourselves even more than poetic license, that the original documents of the Toscanelli-Martins correspondence may have disappeared without having excited the attention of any

other person except Columbus, and that furthermore the relations which subsequently existed between Toscanelli and Columbus himself should have been known to Las Casas alone.

But then we must go even one step further. We must consider as possible the existence of a Canon of Lisbon, closely connected with the king himself, whose very name has escaped the notice of all those who should and must have known him; we must accept that King Alfonso was seeking to reach the Indies by the west at a period when no one in Portugal was thinking of going to them even by the east, and when neither the question of the route to the Indies nor the spice trade existed in the Iberian peninsula; we must remain unsurprised that all the documents and chroniclers of the period leave unmentioned a fact of this nature; that no one about Toscanelli was ever aware that he occupied himself with finding a new route to the Indies; finally, we must consider it was quite natural that a great scholar like this astronomer should adopt the system of Marinus of Tyre without perceiving how erroneous it was, and that Columbus should copy with his own hand a document which would otherwise seem to have been completely unknown to him.

On these conditions, but only on these conditions, can we admit that these letters of Toscanelli, which from their antecedents as well as from their contents bear the stamp of forgery, are genuine.

V.—VARIOUS OBJECTIONS.—The conclusion, to which so many reasons lead us, that all these documents are apocryphal, is not, however, without its difficulties and

objections. If, indeed, as we have supposed, the letters of Toscanelli were concocted to destroy the suspicions of those who alleged that Columbus had secret information wherewith to make his discovery, why did the authors wait to make use of the fraud till the publication of the volume of 1571, that is to say, till a period when the question which suggested the forgery was forgotten; and how came it to pass unnoticed that, if these letters prove Columbus owed nothing to any pilot whatsoever, they also proved he owed everything to the learned Florentine, who, fifteen years before him, apparently conceived, formulated, and proposed his own scheme expressed exactly in his own terms?

If Duke Hercules d'Este learned in 1494 of the relations Toscanelli had with Columbus, how are we to reconcile this with the facts we have proved in this work, that the letter to Martins carries in itself evidence of having been fabricated at a period much later than the date it bears?

If Columbus actually copied with his own hand this letter, how are we to explain his attitude which throughout his life was contrary to the supposition that he knew of its existence?

If the documents attributed to Toscanelli are apocryphal, as everything appears to indicate, why were they fabricated, since neither Columbus nor his heirs made any use of them, and they were not made public till long after the great man was dead?

Here we have several obscure points on which criticism hesitates to express a definite opinion. But these points are only secondary and do not affect the kernel of the question; and, no matter how embarrassing they may prove, they

cannot succeed in destroying or even weakening the force of the formidable array of facts heretofore marshalled against the supposition that the documents attributed to Toscanelli are authentic. It is, moreover, certain that discussion will throw light upon these points, and will in the end show how they are to be reconciled with the unimpeachable results obtained by sound criticism. Those who may follow us in this investigation will reach a further point; they will seek for and discover some circumstance not yet laid bare which shall make clear what is now obscure; they will institute a comparative study between the linguistic expressions of the letter of the 25th June 1474 and those in use at Florence at the same period, and will let us know if we are really in presence of a document belonging to the most brilliant era of Florentine Latinity. An examination of this character will remove the last doubt, and will finally settle the question, if what we have here done does not suffice for that purpose.

As a whole, the question, in its present state, may be summed up as follows: our belief in the existence of the relations attributed to the Florentine scholar with Martins and Columbus rests wholly on a single witness, the Bishop of Chiapas, who indicates his authorities but vaguely, who wrote seventy years after the time these relations are supposed to have existed, and whose assertions on this point are absolutely irreconcilable with well-established facts.

II.—COLUMBUS' SHARE IN THE DECEIT

I.—Columbus could not be ignorant of the Fraud, yet he never mentioned the Spurious

DOCUMENTS.—Now that we have closed our inquiry and have demonstrated what may, nay, what must be thought on the question of the authenticity of the documents attributed to Toscanelli, as well as the question arising therefrom, viz., the true origin of Columbus' great undertaking, we must say a few words about Columbus himself, and of the personal part he played in the intrigue, the source and motive of which we have endeavoured to find. Let us as a preliminary state that Columbus could not have been ignorant of the fraud committed in his interest.

The name of Toscanelli was mentioned in 1494—of that there can be no doubt—and the documents which bear witness to the fraud are there. It would be contrary to the logic of events to believe that the most interested person knew neither of the mention of the name of Toscanelli nor the fact that certain persons had concocted or proposed concocting documents which purported to have come to him from that scholar. We are therefore driven to admit that Columbus intentionally refrained from making any mention of the relations he is supposed to have had with the learned Florentine.

But why? What is the motive for this stubborn silence, as strange if the documents were authentic, since Columbus owed nothing to them, as if he had aided in their fabrication; for in the latter case he would surely have used them? Was it that he wished to benefit by the fraud without appearing to have dabbled in it?

But, as a matter of fact, he neither profited nor sought to profit by it; and it would seem that had he had any such intention, it must have leaked out one way or another; for a man so profuse and exuberant in speech and writing

as Columbus must have let slip his secret desire, and we should somewhere have traced his hand in the plot; yet such is not the case, for as long as he lived the forgery remained, for him as well as for all his family, as though it had never existed.

If we therefore brush aside this supposition, and, nevertheless, are bound to admit Columbus could not be ignorant of the fraud, we find ourselves faced by the following alternative:—

Either at first Columbus was tacitly or directly associated with the trick and he afterwards drew back, or throughout he declined to participate in it.

If it were shown that he was really the author of the transcription of the Latin text in the volume of Pius II in the Colombina, his complicity would be demonstrated, and there could be no hesitation in saying that he knew not only of the fraud but had taken a hand in it. But this proof has not yet been established, nor indeed could it be, when the only evidence consists in mere resemblance of handwriting, a form of testimony which has often led to error, and must in its very nature be always inconclusive. Meanwhile criticism has a right to say that the supposition which exonerates the discoverer of America from all active participation in the trickery we seek to unmask is the only one that is in agreement with all the facts as they are known to us.

II.—Possible Explanation of his Attitude.—To the very important and material fact that Columbus always acted as though he was ignorant of the suggestion that he had had relations with Toscanelli, we must add that this

attitude was logical on his part, and is to be explained by a very good reason, namely, that the fraud, invented on his behalf, was at once useless and dangerous to him. It was useless, because it was easy to foresee that the story of the pilot, being based on no positive evidence, would in the course of time be forgotten, or would at least lose all importance, as in fact happened, and that consequently there was no reason to be inordinately distressed by the unpleasing impression it had created.

It was dangerous to him because it substituted for the pilot so weighty and competent a rival as Toscanelli, in claiming the merit, to which Columbus tenaciously clung, of having discovered the reasons which demonstrated the possibility of reaching the Indies by the west.

We may further remark, and it is a remark very much to the point, that it was the invention of this pretended correspondence with Toscanelli that drew the critic's attention to the forgotten or despised story of Columbus having received information from a pilot; it led to the searching inquiry which established the truth of that story at least in its essential points. Had the letter to Martins never been produced, the adventure of the anonymous pilot would still be generally considered as a legend built on no substantial foundation. The very same reasons which tell against the authenticity of this famous letter demonstrate that this legend about the pilot bears the very stamp of truth. Thus, in abstaining from meddling with this affair, Columbus had a very excellent reason, beyond the mere risk of compromising himself.

III.—UNEXPLAINED POINTS.—This reason does not,

however, explain all. In a story so old as this, which has not yet been cleared up by discussion, there always remain some obscure points which it is difficult, if not impossible, to lay bare. Among these we must class the period when Columbus was induced to assume the attitude he adopted, and the late date at which the letter was fabricated.

As regards the first, we may imagine things happened much in this way :—

The forger—we have seen that everything points to Bartholomew as being that person—after having spoken in 1494 of the relations of Toscanelli with his brother, whom he had not seen for several years and who had just left for his second voyage, rejoined him in the month of April of this year in Hispaniola; it was only then that the brothers were able to consult together as to what sequel should be given to the campaign already begun by Bartholomew, and we think it was at this moment Columbus decided to cut himself adrift from an intrigue so imprudently got up, and to forbid its being carried further. What is undeniably certain is that from 1494 Columbus and his family maintain silence, a complete silence, on the correspondence with Toscanelli and on the information supposed to have come from him.

We have no guide as to the second point. The letter to Martins carries in itself the proof that it was drawn up after the discoveries of Columbus; but no explanation can be given why it was written at so late a date, seeing that there was no intention to use it, and, as a matter of fact, it never was used. Was it that Bartholomew, who was a headstrong man, determined, in spite of all, to carry out his scheme, in the belief that perhaps later it might

prove useful? Was it before or after the death of Columbus that he concocted this document, which, with its accompanying map, remained among his papers, where later on they were found? Was it, as we have supposed, Luís Colón who gave them to Las Casas, or was it Las Casas who himself brought them back from Hayti where Bartholomew had died?

These are questions to which it is impossible to reply as yet, but which later on will doubtless be cleared up. After all they, too, have only a secondary importance.

The essential fact, the new fact, which it is the object of this work to establish, is that everything tends to show that the letter to Martins is apocryphal, and that it was concocted for the purpose of showing the discovery of America resulted from the application of a scientific theory devised by Columbus, and sanctioned by a great scholar, whereas, in fact, it was solely due to practical information about which Columbus and his family never breathed a word. For our part we do not hesitate to say the fraud is evident, and that all the surroundings of the case point to Bartholomew as being both the inspirer and the agent. We do not think it can be proved that Columbus himself participated in it to any degree.

IV.—COLUMBUS IS NOT BLAMELESS IN THE MATTER. —But, though this proof cannot be established, it is necessary to state that it is equally impossible to exonerate the great navigator from all complicity in a plot which had both the intention and the result of making history lie in attributing to the discovery of America a character and origin different from the true facts, and in according to the author of that

discovery a credit to which he was not entitled. If Columbus refrained from taking part in the concoction of the correspondence attributed to Toscanelli, he has at least carefully hidden his obligations to the unlucky pilot, to whom in fact he owed everything. He has allowed it to be believed, he has even taken trouble to have it believed, that his discovery was the result of a laborious working out of a scientific conception, whereas in fact it was solely due to material and practical information secretly obtained from another; and by so doing he has usurped before posterity a place to which he was not entitled. Nothing can wash his character clear from this stain; not even his many misfortunes borne with heroic fortitude, nor the greatness of the service he rendered to the world, nor yet the nobility of soul and loftiness of character he often showed under critical circumstances. There are some moral weaknesses which nothing can obliterate.

This was not, unfortunately, the only weakness from which Columbus suffered. Whatever may be the admiration felt for his great qualities, his indomitable energy, his steady perseverance in pursuing the end he had in view, his unshaken loyalty to the sovereigns who had employed him, his uprightness in all that touched the performance of his public duties, we cannot shut our eyes to certain traits in his character which reveal him in a very unfavourable light. He was violent, haughty, greedy, harsh, dissembling, and, worst of all, untruthful.

V.—COLUMBUS' TERGIVERSATIONS.—Columbus never spoke one word of truth on what related to himself personally; and his family, on this point, have carefully followed

his example. Throughout his letters and writings he has sprinkled incorrect statements, skilfully devised, with the object either of obscuring certain portions of his life or of hiding traces of his origin; and, in fact, these statements have resulted in the creation of a sort of conventional history as to the formation of his ideas and the causes which led to his discovery. The principal disseminators of this history were Las Casas and Ferdinand Columbus, and criticism to-day is destroying fragment by fragment this falsification. Already the majority of the lies of which it is composed have been subjected to the light of truth, and by degrees we are beginning to form a correct notion of that part of the life of the crafty Genoese he and his have been pleased to present to us under such false colours. We know nearly everything they so carefully sought to hide, and we want but very little to be in a position to reconstruct the story of the birth and early life of the discoverer of America, as well as the real origin of his great undertaking.

We know where and when he was born. We know the standing of the family to which he belonged. We know with sufficient accuracy the employment of his time during his early years.

We can say when and how he arrived in Portugal. We know why he fled from that kingdom. We know, finally, what is to be thought of his pretended proposals to the various European Courts.

If to all these things which Columbus and his family sought to hide, or on which they have sought to deceive us, we now add the demonstration that the correspondence on which alone rests the belief that the discovery of America was the result of a scientific conception care-

fully elaborated is a forgery, the whole history of the origin of the scheme which resulted in that discovery changes its aspect, and we can no longer leave on the pedestals where history has placed them the lucky Genoese who carried out that scheme, and the learned Florentine who is supposed to have inspired it.

The work of criticism in its efforts to reconstruct the different phases of the youth of Columbus, and to point out the circumstances which really determined his vocation, if we may use that expression, has perhaps not been pushed sufficiently far to allow us to formulate, with full knowledge, a conclusive opinion on the man whose name is indissolubly connected with the greatest event in the history of the world. Nevertheless if, in spite of the gaps remaining to be filled in the work of reconstructing the history of the early years of Columbus, and of the causes which gave birth to his project, we were called upon to present in a concrete form the results already obtained or foreshadowed by criticism, we should be disposed to assert that many points in the life of Columbus, on which he and his biographers have sought to mislead us, are now sufficiently well known in their true light to permit us, in the following paragraphs, approximately to sum up the true facts which have been replaced by the legend accepted as history.

VI.—THE TRUE BEGINNINGS OF COLUMBUS.—Columbus was born at Genoa. The year of his birth was not 1436, as his friend Bernaldez, the Curé of Los Palacios, would have us believe, nor was it, as is generally supposed, one of the years between 1446 and 1451, but in the latter

year 1451 itself. If Las Casas, if Ferdinand Columbus, if Columbus himself, have made a mystery of this fact, of which the two former could no more be ignorant than was Columbus himself, it was because by revealing it they would be giving a clue to the discovery of certain events which they desired to conceal.

Contrary to what he wished to be believed and to what Las Casas and his son Ferdinand have set forth, Columbus belonged to an artisan family who lived by manual labour. Contrary to what he said himself and to what his authorised biographers have recorded, there was no famous admiral in his family. The two celebrated Colombos to whom reference is made belonged neither to his blood nor country.

Again, contrary to what both Las Casas and Ferdinand allege, he was never at the University of Pavia. The only education he ever got was such as he obtained from the schools founded and maintained by the Genoese weavers and what he was able to procure for himself.

He never commanded a galley for King René, nor fought in a campaign for that monarch, as he claimed to have done, and as Las Casas and Ferdinand repeat after him. At the time in question Columbus was only nine years old. He had neither overrun the seas as he boasted to have done, nor sailed for forty years, as he wrote in 1501 to the Catholic kings. Forty years earlier than 1501 bring us to 1461, a date when Columbus was just ten years old.

It was not, as his son Ferdinand and his panegyrist Las Casas affirm, aboard a vessel commanded by his relative Colombo that he first arrived in Portuguese waters. He

arrived on board a Genoese vessel forming one of a convoy going to Lisbon in 1476, which convoy was attacked by this very Colombo within sight of Cape St. Vincent. This Colombo was neither his relative nor his countryman: he was a Frenchman, and the two Genoese ships which escaped his attack reached Lisbon in the December of 1476.

Contrary, therefore, to what many historians, blindly following Las Casas and Ferdinand Columbus, have said, it was not in 1470, as Humboldt, Washington Irving, Fiske, and others think, nor in 1473 or 1474, as Harrisse, Winsor, and Markham decide, that he arrived in Portugal, but towards the very end of 1476, when he was twenty-five years of age. It is untrue that Columbus left Portugal secretly because King Joao II wished to rob him of his secret, as Las Casas and Ferdinand Columbus allege. He fled the country because through family connections he belonged to the Braganza party which King Joao pursued with hatred, and because, therefore, his life was no longer safe in Portugal.

It is untrue that this king wrote inviting him to return to Portugal; the letter from this monarch in the archives of the Columbus family which Navarrete has copied was apocryphal: it can now no longer be found. It is untrue that Columbus made proposals to Genoa, to England, and to France. Beyond the assertion of the very persons who have dressed up the history of the discoverer in the fashion it has come down to us, not a vestige of proof or the most trifling trace exists of any such proposals having been made.

VII.—THE REAL ORIGIN AND OBJECT OF COLUMBUS' GREAT SCHEME.—With the exception of the circumstances attending the flight of Columbus from Portugal, circumstances revealed by Señor de La Rosa at a late Congress of the Americanists in Paris, and on which we are not yet sufficiently enlightened, all the assertions we have just made are definitely established, and no new investigation can shake them. Those which follow are not so certain; they rest less on direct proofs than on logical deductions; but, venturesome though they be, there need be but little fear that later criticism will seriously affect them.

The first point to which attention should be directed is that everything tends to show what has been described as the vocation of Columbus dates only from the confidence made him by the pilot who by accident had discovered, or thought he had discovered, unknown islands or lands, and who had convinced Columbus of the reality of his discovery. This is in truth the decisive event in the life of Columbus. From this moment he is seen putting everything in motion in order to obtain the means for setting out to take possession of the lands this pilot had beheld and which Columbus feels sure he can rediscover.

If this supposition be well founded, Columbus, when he sailed from Palos in 1492, had no intention of opening a new route to the Indies and to the land of spices by crossing the Atlantic. His sole object was to go whither the pilot had been who had revealed to him his secret. Let it be noted that he does not appear to have proposed anything more to the Catholic kings; for in the capitulations agreed between them and him—the authentic

text of which capitulations we possess—there is no question either of the Indies or the land of spices, or of any country of the East, but solely of islands and lands he may discover in the ocean, the government or vice-royalty of which islands and lands is reserved to him in case of success; which could not have been the case if it had been a question of discovering a new route to populous islands belonging to civilised nations. We do not forget Columbus asserted he bore on his first voyage letters from the Catholic kings to the great Khan. This assertion, known to us only by Las Casas, is based solely on a statement by Columbus made long after the event, a statement, moreover, which is absolutely unsupported by a particle of proof. Columbus' Log-book says, indeed, it is to the Indies he sought to go, but then we only possess this document in the form Las Casas has given it to us, and it was Las Casas who imposed on posterity a belief in the apocryphal letters of Toscanelli. In support of our manner of looking at things, and recalling what has been previously said on this subject, we may assert that the road-map of Columbus was the one he had himself constructed from the data obtained from the pilot. This map indicated, as we have already shown, the position of the islands and lands this pilot had, or thought he had, discovered; and further, we have shown that Columbus went directly to this point deviating neither to the right nor left for a single moment. We have also seen that once Columbus was convinced no land existed at the spot indicated he did not know which way to steer; that he frequently changed his course; and that finally he adopted one recommended by Pinzón—to whom no intention of

going to the Indies can be attributed—and that it was purely by chance he discovered Guanahani. In this group of circumstances are we not supplied with sufficient motives for believing that it was only after sailing about the Antilles Columbus concluded he was among the islands off the far eastern coasts of Asia?

VIII.—PRETENDED SCIENTIFIC PREPARATION OF COLUMBUS.—Whether Columbus did or did not start on his voyage with the intention of going to the Indies, we must consider as absolutely disproved the assertion that he had for long prepared himself for his great discovery by the study of those authors who could enlighten him on this subject. These statements of Las Casas and Ferdinand Columbus are contradicted by Columbus' own writings and by his notes on the works he read, notes which reveal the fact that all his cosmographical theories were formulated subsequently to his discoveries. It was after his return from his first voyage, when it was said around him that he had had sure information, and that he had only gone whither he had been told he should find new lands, that it occurred to some to oppose to these rumours the legend of a long scientific preparation which had given him the conviction that the coasts of Asia might easily be reached by way of the west.

This story of the scientific preparation and the one dealing with the Toscanelli correspondence were invented for the purpose of creating the belief that, contrary to what was then asserted, it was a scientific theory approved and suggested by a great scholar that gave birth to the scheme of Columbus. When in the August of 1492

Columbus set sail from Palos he had no such theory in his mind.

IX.—THE DOCUMENTS ATTRIBUTED TO TOSCANELLI.—The documents attributed to Toscanelli hold the first place in the romance about the scientific origin of the scheme of Columbus. We have already said that there is no proof Columbus himself had any part in the fabrication of these documents, and it is without regret we find no trace of the hand of Columbus in the fraud the meshes of which we have sought to unravel in order to discover the motive for its perpetration. We believe not only that Columbus took no part in the fabrication of the apocryphal documents, but, furthermore, that he would allow no use to be made of the fraud. If still later researches should prove the contrary we shall have to bow to the evidence; but until then we would fain preserve the belief that the discoverer of the New World did not stoop to the mean shifts with which, unfortunately, it would seem he can be associated; and that the great character he so often displayed will not be tarnished by the production of that proof which up to the present is not forthcoming. As to Toscanelli, he is clearly foreign to all this intrigue, and, whatever may be the ultimate result of the investigation we have set on foot, his moral worth will suffer no diminution. It will doubtless be found that he took no part in the discovery of America; but he has other claims to fame, and the revealing of the truth will not render him less worthy of the monuments raised to his memory or of the esteem of history.

III.—CONCLUSIONS SUGGESTED

Having made these remarks, we would now submit to criticism the following conclusions, which we present with all diffidence, and giving to them no value beyond what they possess from their perfect concordance with the facts which have suggested them. However logical and convincing they may be, they cannot have other than a purely hypothetical character.

Toscanelli, who died in 1482, never wrote either to Martins or to Columbus. The documents given out to be his contain anachronisms and statements which reveal the trickery.

Columbus has never made even the remotest allusion to these documents; if he was aware of their existence he neither made use of them himself nor allowed others to do so. His own cosmographical notions are indeed those expressed therein; but they were his own personal acquisition, and we know how and when he obtained them: he formed them only after his discoveries, and they were chiefly suggested by the reading of *Marco Polo*, the *Imago Mundi*, and *Ptolemy*. It is not therefore with the object of hiding what he had learned from the letters that he does not mention them. It was the person who concocted the forged documents who introduced therein the notions of Columbus; for the very object of the forged letters was to create the belief Columbus had been enlightened and encouraged by them.

The author of the so-called Toscanelli documents does not appear to have been Columbus, who would scarcely have forged them to hide them, for he has never mentioned

them. The forgery was, moreover, useless, and might have been dangerous to him. Useless, because the story of the nameless pilot was bound to die out of itself, which is just what happened; dangerous, because the letter to Martins lessened Columbus' part even more than did the story of the pilot, as by it all the honour and merit of the discovery could be assigned to Toscanelli—a fact some writers have not been slow to perceive and urge. Nor is the author of the forgery Ferdinand Columbus, because Las Casas does not mention the documents as coming from him, although it was altogether in his interest to do so; the son of Columbus was too well read and too learned to write such a letter as the one to Martins; and—for the same reason—Ferdinand could not have been guilty of the stupidity of making Toscanelli write two letters to say exactly the same thing and in almost identical terms; and, finally, because the Spanish translation of the letters given by Las Casas contains *Italianisms* of which Ferdinand Columbus, a Spaniard born and bred, was scarcely likely to have made use.

The forger was, to all appearance, Bartholomew Columbus, who was a good cosmographer, but a bad Latin scholar; he was also very devoted to his brother. The copy written on the volume of Pius II is in a hand as much resembling his as it does his brother's. Like Christopher, he, too, has also annotated the *Imago Mundi* and the *Historia Rerum* of Pius II.

The invention of the story of Columbus' correspondence with Toscanelli dates probably from Bartholomew's arrival in Spain, the period when it was rumoured his brother had been instructed by a pilot; but the documents themselves were only written later. Thus may be explained how Duke

Hercules, in 1494, came to hear of a correspondence between Columbus and Toscanelli.

These documents, composed on the opinions of Columbus, must have been fabricated after the discoverer's death: if they were anterior to that event they were zealously hidden. They were first produced between 1547 and 1552, the time when Las Casas, who is the first to record them, was revising his book, and was placed in possession of all the Columbus family papers. It was also the time when the story of the pilot who had instructed Columbus was revived by the publications of Oviedo and Gómara.

The person who gave them to Las Casas can only have been the same as placed him in possession of the Columbus family papers. At the period mentioned, Luís Colón, the third Admiral of the Indies, was sole proprietor of these papers. He was a reckless and unscrupulous person; he busied himself preparing the publication of one of the manuscripts of Columbus, and he dabbled in the concoction of the *Historie:* he alone was then in possession of these documents, and he alone could then dispose of them.

The so-called second letter of Toscanelli to Columbus is, in fact, nothing but a first draft of the one to Martins. This is proved not merely by the sameness of the ideas, but by the identity of the expressions. The author of the fraud clearly began by making Toscanelli correspond directly with Columbus; then he substituted for this latter the unfindable Martins.

This letter must have been found among the family papers by Luís Colón, who handed it to Las Casas, together with the final editing—the one to Martins. Doubtless it escaped his attention that the likeness between the two

texts was an indication of the fraud. This letter, moreover, could not have been written after 1481, since Toscanelli died at the beginning of the following year. Now, at that date, Columbus could not speak of his design as a settled scheme; it is even more than probable that at that moment he had no idea whatever of going to the Indies by the west.

To sum up: these letters and map attributed to Toscanelli, these documents which no one ever used, and which no one ever knew except he who produced them seventy years after that [illegible] have never served any other purpose than to create the impression that Columbus had a scientific idea, and that it was this idea which led him to his great discovery.

[illegible] again that these conclusions are largely [illegible] such as the attribution of the fraud [illegible] Columbus rest only on presumptions; [illegible] are suggested by indications that [illegible] enough to carry conviction. Among [illegible] those which relieve Columbus [illegible] in perpetrating a forgery which, [illegible] after his death, and from which, [illegible] profited nor sought to profit. As to [illegible] cannot be absolutely established, so [illegible] circumstances surround the production [illegible] and so many different reasons tend to [illegible] cannot be genuine, that it would appear to [illegible] maintain any doubt on this point. It [illegible] that the trickery, of which there are so [illegible] is not yet absolutely proved; but [illegible] pretend that Toscanelli has really

corresponded with Martins and Columbus without being prepared to justify that assertion, and the real difficulties attending this enterprise will only appear when the attempt is made.

If failure results from this task, one will be forced to admit that the old story of the pilot who gave information to Columbus becomes altogether probable; and one may put forward, without fearing the contempt of serious criticism, that the real initiator of the discovery of the New World may have been, not the celebrated astronomer, whose name fills volumes, and to whom statues have been raised, but the poor mariner who died in obscurity, without even leaving his name to posterity.

APPENDIX A

TOSCANELLI'S LETTER TO FERNAM MARTINS

25th June 1474.

ENGLISH Translation made from the photograph and the copy of the Latin text published in the *Raccolta Colombiana*, accompanied by critical, historical, and geographical Notes.[1]

COPY SENT TO CHRISTOPHER COLUMBUS[2] BY PAUL THE PHYSICIAN,[3] TOGETHER WITH A CHART OF NAVIGATION.

To Ferdinand Martins, Canon of Lisbon, Paul the physician gives greeting.

[1] In this translation an effort has been made to render the exact meaning as well as the language of the document which is alleged to be a copy of the original. The variations occurring in the Italian version of the *Historie* and the Spanish translations of Las Casas and Barcia are given in the notes.

[2] The Latin text, which is supposed to be in the handwriting of Columbus himself, bears Christof*a*ro Colo*n*bo. It should be noticed, however, that the line wherein this name occurs, a line constituting the heading of the document, is in a more regular hand than the body of the letter itself, a fact which authorises the belief that it is not by the same writer who copied the whole text of the letter: furthermore, it has been observed that this line is squeezed into the upper part of the page, and this may be taken as evidence that it is a later addition.

See above; note 157.

[3] *Phisicus—physician.*—The Latin gives this title as *Phixicus;* in a line below the word is written *Phisicus.* Both forms were permissible, but it is unusual to find the same word spelt differently in the first three lines of a document. This is still further evidence that the title was not written by the same hand that wrote the letter.

It was pleasing to me to have intelligence concerning your health,[4] and concerning your favour and familiar friendship with that most generous and magnificent prince, your King. Whereas

The expression *Phisicus*, literally translated by physician, had in the Fifteenth Century the meaning of doctor. We still keep this signification in English; but, as in the Middle Ages a doctor was also called *Medicus*, it has been asked whether Toscanelli was really a doctor (*Bossi: Vita*, note 1 of the Appendix). The fact is now well established: Toscanelli was a medical man, as were also his brother and his nephew Ludovico. He was doctor to his friend Cardinal Cusa, to the de' Medici, and to many others. But in his day medicine was somewhat mixed up with astrology, whereby were forecast births, events during life, and time and circumstances of deaths. Toscanelli, therefore, was also an astrologer, *i.e.*, an astronomer, and Signor Uzielli informs us that astronomy, the practice of medicine, and his devotions occupied all his time.

Neither Las Casas nor Ferdinand Columbus knew the name of Toscanelli. Ferdinand Columbus thus describes him: *Mæstro Paolo fisico di mæstro Domenico Fiorentino* (Master Paul, the physician, [son] of Master Dominic, a Florentine). On two different occasions Las Casas calls him Marco Polo (*História*, vol. I., p. 96 and p. 360). But he adds: "Doctor of Florence," thus showing he did not confuse him with the celebrated traveller who died one hundred and fifty years before Toscanelli. Mariana also calls him Marcus Paulus in his Latin edition, and Marco Polo in his Spanish edition (Book XXVI.), Lelewel also designates him as Marc Paul, adding in parentheses (Toscanelli). The error deals therefore only with the name and not with any confusing of persons. Signor Uzielli thinks it arose from rendering M. Paulus — M, really standing for *magister* or *mæstro*, being translated by Marcus, Marco, and Marc. This seems to be evident. See on this subject Signor Uzielli's short memoir: *Ricerche intorno a Paolo dal Pozzo Toscanelli, Ricerca I:—Della confusione di nomi fra Marco Polo e Paolo Toscanelli* (Bollet. della società Geogr. Italiana, Maggio, 1873, Roma).

[4] Or: "By what you tell me of your health it was pleasing to me," etc. The writer appears to allude to something contained in the letter to which he is supposed to be replying. It is strange that the Spanish text suppresses this portion of the sentence, and, consequently, it is also missing from the Italian version, which was evidently translated from the Spanish; for, if the translator had had the so-called Latin original before him, it is difficult to see why he should have left out these words.

· I have spoken with you elsewhere[5] concerning a shorter way of going by sea to the lands of spices,[6] than that which you are making by Guinea;[7] the most serene King now wishes that I

[5] Or: "I have already told you of," etc. In the Spanish it runs: "And though I have other ofttimes spoken of . . . " (*y bién que otras muchas veces tenga dicho . . .*). The Italian translator evidently strives to establish that personal relations existed between Toscanelli and Martins, for, towards the end of his version, he has interpolated a phrase to the effect that they had spoken face to face.

Signor Uzielli thinks the intercourse between Toscanelli and Martins was both personal and epistolary (*Toscanelli*, No. I., p. 147). See Ximenes: *Del Vecchio*, note C., III.

[6] *The lands of spices.* — In the Italian we have: *to India.* The Spanish version runs: *to the Indies where the spices grow.* In the Fifteenth Century the East Indies were commonly known as the Indies of the Spices, a designation to be found as early as Marco Polo, who so describes them.

Therefore, according to the author of this letter, the Portuguese thought of going to the spice-producing countries even earlier than 1474, for in writing this letter he reminds Martins that he has previously discussed this question with him. It has already been observed that in 1474 the spice question did not exist in Portugal. (See First Part, chap. iii., §§ 1, 2, and 6, and also note 64). Ximenes, who was not well informed on the subject, thought, like the author of the letter, that as early as this the Portuguese had a commercial interest in seeking to obtain spices from the land of their production. He also gives some curious information on the Spice Trade of antiquity (*Del vecchio e nuovo Gnomone*, etc., p. lxxxi.).

[7] *By Guinea.*—The Latin text has: *quam facitis per Guineam.* The Spanish says: Which you take for Guinea (*que vosotros haceis para Guinea*), which is not at all the same thing, and besides has no meaning. The Italian renders the passage: Which you make by Guinea (*che voi fate per Guinea*), which is more correct, but yet does not give the full meaning of the phrase. Toscanelli, or whoever was the author of the letter, could not have intended to say in 1474 that the Portuguese went to the Indies by way of Guinea. What he wished to say was that they sought to go by that route. It must therefore be rendered, "which you are making," or "which you are opening out by Guinea." Ximenes, who did not know the Latin text, was greatly puzzled by this phrase, which he seeks to explain by imagining the Portuguese had gone to the East Indies by the south-east route before Vasco da Gama's expedition, and that, fearing competition, they had jealously kept their voyages secret. Ximenes finds confirmation for this

should give some explanation thereof, or rather that I should so set it before the eyes of all, that even those who are but moderately learned[8] might perceive that way and understand it.

But though I know[9] that this could be shown by the spherical form, which is that of the world; nevertheless I have determined to show it in the way in which charts of navigation show it, and this both that it may be more readily understood, and that the work may be easier.[10]

Wherefore I send to His Majesty a chart, made by my hands, wherein your shores[11] are shown, and the islands from which

singular hypothesis in an assertion of the account by the gentleman of Florence (Sernigi) given by Ramusio (vol. I., Second Edition, p. 130), that Vasco da Gama discovered 13 leagues beyond the Cape of Good Hope. Vasco da Gama therefore, he cries, did not discover the Cape of Good Hope! (*loc. cit.*, note iv.). The anachronism, incomprehensible to Ximenes, exists, but not where he thought it to be: it consists in assigning to the Portuguese, in 1474, the intention of going to the East Indies. At that period they had no such idea: it was for the India of Prester John they sought. (See for the proof of this statement the text above).

[8] In both the Spanish and Italian versions this clause is suppressed. Here, again, if the Italian translator had the Latin text before him, it is strange that the fancy should have occurred to him to make exactly the same suppression as the Spanish translator had also made.

[9] The Spanish here adds: *de mi*, which may fairly be rendered "of my knowledge" or "by experience."

[10] Mr Harrisse thus translates this passage: "so as to be better understood and to facilitate the enterprise" (*The Discovery*, p. 381). Doubtless he was thinking that Toscanelli had in view the voyage about which he was being consulted. A comparison of the three texts Latin, Spanish, and Italian, does not substantiate this rendering.

[11] *Your shores.*—By this expression must be understood the western shores of Portugal and Africa, re-discovered and explored by the Portuguese who claimed them as their own, a claim which the Popes had admitted. The following phrase, which is found in the Spanish text in place of these two words: "all the extremity of the west starting from Ireland southwards to the end of Guinea," shows that it was in this sense the first translator understood them. No other meaning can be given to them. It should be observed that the Italian translator, if he knew the Latin text, puts it aside and renders, word for word, the Spanish version.

you may begin[12] to make a voyage continually westwards,[13] and the places[14] whereunto you ought to come, and how much you

[12] This evidently refers to the Canaries. No other isles exist from which a long voyage could be undertaken in that neighbourhood, either southward or westward, and in fact it was from the Canaries the Portuguese navigators who sailed from Lagos, below Cape St Vincent, to go to Guinea took their course. Toscanelli, if it were he who wrote this letter, would appear to have known this fact.

[13] *Westwards.*—According to the Latin text the course to take for the Indies was not, as some have thought, the parallel of Lisbon, but that of the Canaries, which was indeed the parallel Columbus took.

The Spanish version, and, following it, the Italian, alter completely this passage. Instead of saying that the chart denotes "your shores and the islands from which you may begin to make a voyage continually westwards" (*in qua designantur litora vestra et insule ex quibus incipiatis iter facere versus occasum semper*), it says it shows "all the extremity of the west, starting from Ireland southwards to the end of Guinea, with all the islands that are on this route, opposite which [islands] due west is the beginning of the Indies."

Here we are faced by an alteration of the Latin text sinning at once both by omission and commission. The very important information that one must start from the islands and voyage continually westwards is suppressed, and is replaced by the statement that opposite these islands, at the end of the journey, will be found the beginning of the Indies, a fact not mentioned in the Latin text. This variation, which is clearly the work of the Spanish translator, is difficult to explain. Did this translator work on a Latin text different to the one we possess, or did he, as Mr Harrisse supposes, add to his version information obtained from the chart which accompanied the letter? Either hypothesis is plausible; but yet a third remains which is equally so. If the unknown author of the Spanish version were also the author of the Latin text, which we have very many reasons to believe is apocryphal, he might well have introduced into it changes he thought advisable for his purpose, and all the more easily since the Latin text was unknown, so unknown or concealed in fact that the author of its translation in the *Historie* was unable to obtain a sight of it, and it was only centuries afterwards, and then by mere chance, that it was brought to light. This supposition is clearly somewhat venturesome, and, in order to entertain it, we must not forget the reasons which give rise to a belief that neither the letter to Martins nor the famous chart which accompanied it came from Toscanelli. Anyhow it is the Latin text which here conveys the thought of the author of the letter.

[14] The Spanish adds: "with the islands." The Italian copies the addition.

ought to decline from the pole or from the equinoctial line,[15] and through how much space, *i.e.*, through how many miles you ought to arrive at the places most fertile in all spices and gems. And do not wonder if I call those places where the spices are western, whereas they are commonly called eastern: because to those that sail by subterranean navigation[16] those places are ever found in the west. For if (we go) by land and by the upper ways[17] they will always be found in the east.

The straight lines, therefore, marked lengthwise in the chart, show the distances from east to west, but those which are transverse show the space from south to north.[18]

[15] The Spanish translation has: "with the islands and places whither you can deviate (*desviar*) by the equinoctial line;" the Italian runs: "with the islands and places whither you may go: and how much from the *Arctic* pole you may deviate by the equinoctial line." The meaning of this is widely different from the Latin, but it comes nearer to it than does the Spanish version. The addition of the word *pole* which is not in the Spanish, although it occurs in the Latin, is one of the few reasons for thinking that the Italian translator may also have been acquainted with the Latin text of the letter. Nevertheless we incline to believe there has been an interpolation of the whole phrase, for the two words *Arctic* and *by* do not occur in the Latin. Ximenes infers from this passage that Toscanelli's chart was graduated into longitudes and latitudes (*Del Vecchio*, note F., VI.).

[16] The Latin says: *per subterraneas navigaciones* (by subterranean navigation); it may also be rendered by "the under hemisphere" or "the hemisphere which is opposite to ours," that is to say, by that of the setting sun, as the two old versions in Spanish and Italian translate it without taking further notice of the strange expression *per subterraneas navigaciones*. Fiske and Markham translate: "on the other side of the earth;" Mr Harrisse employs: "in the hemisphere which is opposed to ours;" and Mr Payne says: "beneath the globe."

[17] *Per terram et per superiora itinera*, meaning the usual route by the east. The Spanish and Italian simply render this somewhat quaint Latin expression by "the East." Markham says: the "upper side" of the earth; Mr Harrisse uses, "higher hemisphere;" Payne, "above the globe."

[18] *The straight lines marked lengthwise and transversely.* These two expressions of *straight* lines and *transverse* lines have given rise to much discussion. Generally it is held that the first correspond to

But I have marked in the chart divers places where you might arrive,[19] and this indeed for the better information of

parallels and the second to meridians. This is Signor Uzielli's view. He says: "Toscanelli means by *transverse lines* the arcs of meridians denoted by straight lines drawn on the maps perpendicularly to the *straight lines* representing the parallels" (*Toscanelli*, No. I., p. 12). This opinion would appear to be justified by the phrase of the author of the letter saying that the straight lines are drawn lengthwise in the chart; but this ambiguous phrase loses all value before the very clear expression which follows, *i.e.*, that the straight lines show the distance from east to west and the transverse lines the distance from north to south. If the straight lines were parallels they could not indicate the distance from east to west, and if the transverse lines were meridians, they would show nothing relative to the distances between north and south. When the straight lines are taken for parallels and the transverse lines for meridians it is supposed that the so-called Toscanelli chart was orientated in like manner to our modern map, and that the north was placed at the top. But in the Middle Ages there was no fixed rule for this, and generally it was the east which occupied the upper portion of the map, so that the west filled the lower part, the north lay to the left, and the south to the right. The famous Bianco map, 1436, wherein the island of Antilia holds a striking place, is arranged after this fashion, as are also the world map of Vesconti, 1320, and the well-known map of Marino Sanudo, given by Bongars, wherein the legends point out the four cardinal points: at the top we read *Oriens* and at the bottom *Occidens*. If the chart under discussion were similarly constructed, *i.e.*, if the north lay to the left and the south to the right, then the straight lines, drawn in a longitudinal direction, would truly represent distances east and west, while the others, running crosswise on the chart, would really indicate the spaces contained between north and south.

Hermann Wagner, who is so competent in such matters, understood these two expressions as we do, and so does Mr Harrisse, for he translates the Latin phrase as follows: "The *longitudinal* lines . . . traced on the map show the distance from east to west, the *horizontal* ones show the distance from south to north" (*The Discovery*, p. 382). We may add that, in the opinion of Wagner, the Latin expression of *lineæ rectæ* meant in the Middle Ages straight as well as perpendicular lines.

Whatever may have been the orientation of this map, we take it as established that its author meant by straight lines, lines which would be perpendicular on our maps, *i.e.*, meridians, and by transverse lines those which run crosswise in our maps, and, in fact, correspond with our parallels.

[19] The Spanish says: "Many places in the extent of India." This the Italian version repeats.

navigators if they should come by the winds or by some chance where they did not think to come: but this is partly in order that they may show the inhabitants that they have some knowledge of that country—which will surely be no little pleasure to them.[20]

It is said only merchants stay in these islands; for here there is so great an abundance of men sailing with merchandise, that in all the rest of the world[21] they are not as they are in a most noble port called Zaiton,[22] for they say that every year a

[20] In the Spanish and Italian this phrase bears quite a different meaning. The first runs: "And also in order that all these parts may be well known, whereof you should much delight." The Italian has: "And furthermore to give you full information of all these places which you greatly desire to know." This passage is not very clear in the Latin.

[21] The Italian version puts: "As in all the other parts of the world."

[22] *Zaiton.*—Zaitem (Marco Polo, Paris Geo. Soc. edit.), Cayton (Ed. Pauthier), Zayton (Yule and Cordier). It is now Chang Chau (Phillips, Cordier), an important city of the Fo-Kien Province, in latitude 24° 30′ north, and longitude 117° 40′ east. Klaproth, Yule, Pauthier, and some others have preferred to recognise Zaiton in Tsuen Chau, and it is under the French form of that name, Tsiouen-Tcheou, that it will be found in Vivien de Saint-Martin's great dictionary. M. Cordier had also been of this opinion, which he has maintained in a long note to his edition of *Odoric* of *Pordenone*, pp. 268-281. But since then he has returned to the subject and has recognised that Zaiton must be identified with Chang Chau (*L'Extrême Orient dans l'atlas Catalan*, Paris, 1895, pp. 32-33).

According to the Chinese Imperial Geography this name comes from a tree with oily berries called *Thung*, which was planted around the town. Thung-Ching means the City of Thung or Trees (Pauthier, p. 528, note). Arab authors merely translated this when calling the place *Zaitoun*. All that the letter to Martins says concerning this city comes from Marco Polo (chap. clvi., Pauthier's edition, p. 527; Book II., chap. lxxxii., Yule's edition, vol. II., p. 218), who has not exaggerated its importance in his time. Ibn Batoutah, who visited it, about the same time, also refers to the great commercial activity of its port (*Voyages d'Ibn Batoutah*, Paris, 4 vols. in 4°, vol. IV., p. 269). Odoric who went there much later (about 1325) speaks of it in the same way (*Odoric*, Cordier's edition, pp. 263-265). Conti, whose journey dates at the beginning of the Fifteenth Century, and who went through Zaiton, does not speak of it, showing thereby that at

hundred large ships of pepper are brought into that port, without (counting) other ships bearing other spices. That country is very populous, and very rich, with a multitude of provinces and kingdoms and cities without number, under one prince who is called the Great Kan (*sic*),[23] which name in Latin means *rex*

that date it had already lost its former importance (Major's edition of *India in the Fifteenth Century*, p. 15). Ximenes devotes to this city a long note which is now without interest (*Del Vecchio*, note G, viii.).

[23] *Great Kaan.*—The Great Kaan, says Marco Polo, was the Lord of all the Tartars (Yule's edition, vol. I., p. 10; Pauthier's edition, pp. 9 and 185), and the information he gives on several occasions shows indeed that this potentate had a great number of princes subject to him. Conti says that "Emperor" is the equivalent of his title (Major's edition, p. 14).

A distinction must be drawn between *Khan* and *Kaan*, as Marco Polo writes. Khan, sometimes written Han, is a Turco-Tatar (Mongol) term, meaning chieftain, prince, or ruler. The Mongols gave it a wide extension, and in the course of time, particularly in Persia and the countries of Asia, it lost its original signification and came to denote merely a lord. (Lacouperie—*Khan, Khahan and other Tartar titles.* London: *Babylonian and Oriental Records*, December, 1888, in 8°, p. 2). *Khakan* or *Khagan*, composed of *Kha*, which means first, great, powerful, and of *Khan* or *Han*, meaning prince or sovereign, is equivalent to Great Khan or Great Prince. It is the title of supreme sovereignty among the Tatars, and has been in use from the Sixth Century (*ibid.*, p. 4). Jenghis Kan means very powerful Khan (*ibid.*, p. 6).

Ogotaï, Jenghis' successor, elected in 1229, took the title of *Kaan*. Mangu, elected in 1251, and Kublai, in 1258, preserved it: Kublai, who conquered China and founded the Yuen Dynasty, made it the title of the Mongol sovereigns of China (*ibid.*, p. 10). On the fall of the Mongol power and the accession of the Mings the title of Kaan lost some of its prestige, and it ceased to have any at all when the Manchus, who now rule in China, overthrew the Mings in 1634 and completed the destruction of the Mongols. (See also on these titles: Yule, *The Book of ser Marco Polo*, 1875, vol. I., p. 9, note).

In his notes written on his copy of Marco Polo, Columbus underlines the words *Gran Kaan* (No. 11 of the *Scritti* in the *Raccolta*). The discoverer of America appears to have been wonder-struck by what he read of the power of this potentate, and he annotates or underlines all he finds on this subject, not only in Marco Polo, but also in Pius II's *Historia Rerum*, wherein he marks eight references of this character (Nos. 112, 118, 119, 176, 188, 291, 344, and 376 of the *Scritti*), and in the *Imago Mundi*, where he underlines two others (Nos. 167 and 782 of the *Scritti*).

regum (king of kings), whose seat and residence are chiefly in the province of Katay.[24] His ancestors desired to have fellowship with the Christians. For it is now two hundred years since they sent to the Pope[25] and asked for several men learned in the faith, in order that they might be enlightened. But those who were sent went back, being hindered on their journey. In the time of (Pope) Eugenius,[26] also, one came to Eugenius and spoke of (their) great goodwill towards Christians. And I held speech with him for a long time on many things, on the greatness of the royal buildings, and on the greatness of the rivers of wondrous breadth and length,[27] and on the multitude of cities on the banks of the rivers; and how on one river there are established about two hundred cities, and marble bridges of

[24] This piece of information is borrowed from Marco Polo (Yule, vol. I., p. 354). Columbus has annotated the passage, and in his *Diario*, under date of 30th October, he announces his intention of going to Cathay. See First Part, note 6.

[25] This was the Embassy Kublai Khan sent in 1267 with Nicolò and Maffeo Polo, the father and uncle of Marco Polo. The ambassador, whose name was Khogatal, fell ill on the journey and returned home. The Polos proceeded and reached Venice in 1269; but the Holy See was vacant, no successor having yet been chosen to Pope Clement IV, who had died in 1268. The Polos, weary of waiting for a new Pope to be elected, set out again for the east accompanied by Marco in 1271. Hearing on the way of the election of Gregory X, they returned once more and were able to accomplish their mission (Yule, vol. I., p. 13; Pauthier, p. 12.) See also Yule's *Introduction*, pp. 15-19. Columbus annotates the passage (*Scritti*, No. 12) which appears to have particularly struck him, for he recalls the fact on two several occasions in the introduction to his *Diario* (Markham, p. 16) and in his letter of the 7th July (*Scritti*, vol. II., p. 202, and Major's *Select Letters*, p. 205).

[26] Eugenius is named twice in the same phrase without any further qualification; the Spanish adds, "*Papa*" *Eugenio*, and the Italian says, "*Papa*" *Eugenio* "*IV.*" This Pope was in fact Toscanelli's contemporary, and occupied the Holy See from 1431 to 1447.

[27] Between this phrase and the following the Italian inserts: "and he told me many wondrous things concerning . . ."

great breadth and length adorned with columns on every side.[28]

[28] *The Ambassador who is alleged to have informed Toscanelli.*—This passage has greatly troubled the critics. For, indeed, no other oriental embassy to Pope Eugenius IV is known than that of the Copts of Ethiopia (Abyssinia), whose sovereign was then held to be Prester John, and whose rule was still placed in India by common report. This embassy, of which the two principal personages were Andrea d'Ethiopia and Alberto de Sarteano, consisted of about forty individuals. The celebrated Florentine historian, Scipione Ammirato, who died in 1601, says it was sent by John, or Ciriacus, King of the Ethiopians, commonly called *Prete Janni* (*Istorie*, Florence, 1828, vol. VII., p. 324). Baronius, who fixes the arrival of these ambassadors at Rome on the 9th October 1441, also says they were sent by Prester John, who is, he adds, Lord of India (*il quale è signore d'India—Annales*, vol. XXVIII., p. 366). They repaired to Florence, where the Council was being held for the reunion of the Eastern to the Western Church, in February 1442 (*ibid.*), and from Landino we know that Toscanelli industriously questioned them (*Georgicon*, Landinus edit., Venice, 1520, p. 48). But, unless we suppose he put into their mouth language they could not have used, it was not these Copts who spoke to him of vast rivers, on the banks of which rose two hundred magnificent cities, and whose waters flowed beneath marble bridges.

Ximenes, who felt the full force of this objection, imagines the ambassador mentioned by Toscanelli was Nicolò di Conti, who arrived at Florence in 1444 after travelling for twenty-five years through the countries of the Far East (Ximenes, *Del Vecchio* . . . note K, x.) The father and uncle of Marco Polo had formerly been entrusted with a sort of diplomatic mission to the Pope by the Great Khan; it was easy to suppose that Conti had been similarly commissioned. But, besides the fact that in Conti's day there was no longer a Great Khan in China, Nicolò returned to Italy definitely, and had no intention of going back to the East like the Polos; moreover, during his travels, he had been compelled to deny the faith, and this fact was not calculated to place him as a *persona grata* in the esteem of the Holy Father. We need not, therefore, linger over this hypothesis, which Humboldt, moreover, has shown to be untenable (*Examen critique*, vol. I., pp. 220-223).

If no other explanation of this passage in the 1474 letter could be suggested, we should be entitled to see in it another proof that this letter is apocryphal. But in the Portuguese version of Conti's Narrative, published at Lisbon in 1502 by Valentín Fernández, at the end of his Marco Polo, as also in the Latin text published by the Abbé Oliva in Paris in 1723, a passage is found, which hitherto has re-

This country is worthy of being sought by the Latins,[29] not only because from thence may be obtained vast gains of gold and silver and gems of every kind, and of spices that are never

ceived but scant attention, which possibly gives the key to this difficulty. In this passage Poggio, the author of Conti's Narrative, says that while preparing this work there arrived at Florence another personage, coming from "Upper India which is towards the north," who alleged he was sent to the Holy Father to obtain information on Western matters, and who spoke of a Christian kingdom in the neighbourhood of Catayo and under the dominion of the Great Khan (Valentín's *Marco Polo*, fol. xciii., *verso*, p. 33, in Major's English version of Conti, Hakluyt Society). May not this have been the ambassador who gave the details mentioned in the 1474 letter? This would seem extremely probable, and there could be no hesitation in affirming the fact were we not stopped by the difficulty that at this period China had long ceased to be governed by a Great Khan. Perhaps this might be explained by supposing that this person from the East may never have mentioned the Great Khan, but gave the monarch of whom he was speaking his proper title, and Poggio, who had the Western idea that the greatest potentate of the East was then as formerly the Great Khan, may have himself employed this expression as best conveying his meaning to his readers. It is very usual for a name or a title thus to linger on, *e.g.*, the Westerns for ages called the ruler of Abyssinia Prester John; the Easterns to this day speak of Europeans as the Franks. Poggio's informant may have spoken of the reigning Ming, and the Christian kingdom may have been Fo-kien or some other province of China where Christians had lingered from the days of Marco Polo: the Viceroy or ruler, having possibly a religious tendency and being desirous of hearing more about Christian philosophy, may have dispatched this messenger to Europe. But if this accounts for Poggio's error it does not explain how Toscanelli, who is supposed to have conversed with that ambassador, derived from him that he was speaking of China, that China was still ruled by a Great Khan, and that the cities called by Marco Polo Quinsay and Zaiton were still known by those names. It is plain that the author of the letter borrowed his information from Poggio without perceiving his error, and without noticing that the ambassador in question appears to be speaking not of China but of a kingdom twenty days' journey from Cathay.

[29] Here a slight variation occurs in the old translations. The Spanish runs: "this land is as worthy as ever [can be] of being discovered;" the Italian has: "this country is as worthy as any other of being discovered."

brought to us; but also because of the wise men, learned philosophers and astrologers, by whose genius and arts that mighty and magnificent province is governed, and wars are also waged. These things (I write) to give some little satisfaction to your demand, in so far as the shortness of the time allowed, and my occupations suffered; being ready to satisfy your Royal Majesty in the future as much further as may be desired. Given at Florence, 25th June 1474.[30]

From the city of Lisbon in a direct line to the westward,[31]

[30] *The Post-Scriptum.*—This line and the whole of the preceding paragraph are, in the Spanish and Italian versions, transposed to the end of the letter, so that the following paragraph, which in the Latin is a postscript, forms part of the body of the letter in these two ancient versions. It has been asked whether this postscript did really belong to the letter to Martins, or whether Toscanelli did not add it to the copy of this letter he is supposed to have sent to Columbus (Fiske, *The Discovery of America*, vol. I., p. 360). But, seeing that the copyist of this letter has in his transcription of it suppressed the few covering lines to Columbus, it is not easy to perceive why he should have preserved this postscript if it also was solely meant for Columbus. The first Spanish translator of the letter, who must have known whence it came, considered that this paragraph, which constitutes, moreover, the essential portion of the letter to Martins, was also intended for him, inasmuch as he has not treated it differently to the rest of the document.

M. Sumien, in a note he sent me on this subject, puts forward another hypothesis. He thinks all this paragraph has been borrowed from the legends or notes inscribed on the map which accompanied the letter to Martins. His theory is that these legends throwing great light on the scheme recommended by the letter, the copyist of the Latin text did not wish to omit them, and therefore incorporated them with his copy, the only one we possess, without any regard to the fact that there they were altogether out of place. But this ingenious hypothesis is only acceptable on the supposition that primarily the authenticity of the letter and map in question is admitted, against which admission have been raised very serious difficulties. In short, it is a hypothesis grafted upon another hypothesis.

[31] *Per occidentem in directo* evidently means in a direct line to the westward. But the writer of the letter does not here indicate the route to be taken for the projected crossing; he merely gives the direct distance between Lisbon and Quinsay. The route to be followed, in order to make the crossing, is shown at the beginning of the letter in

unto the most noble and very great city of Quinsay, there are 26 spaces marked in the chart, each one of them containing 250 miles.[32] For it (the aforementioned city) is a hundred miles round[33] and has ten bridges,[34] and its name means *cita del cielo* (*sic*),[35] City of Heaven, and many wondrous things are told of it,

the passage elucidated in note 13. All those who, like Humboldt (*Cosmos*, vol. II., pp. 317-318), were not acquainted with the Latin text, and those who have not referred to it, have imagined that the route recommended by Toscanelli was that of the parallel of Lisbon.

[32] The three texts, Latin, Italian, and Spanish, are here in complete accord. But Barcia, who translated the Italian text into Spanish before the discovery of the Latin text, alters the 250 miles into 150 miles, and Navarrete, who reproduced Barcia's version in his collection of *Viages*, maintains this alteration. Yet Barcia and Navarrete were learned men well versed in their subject, and the latter undoubtedly was acquainted with the Spanish translation of Las Casas, in the MS. of his then yet unpublished *História*, a translation which, on this point, is on all fours with the Latin. If therefore they made this change it was no doubt because they thought the version in the *Historie* was faulty at least in this passage. But why they should have thought so is a mystery that is left unexplained, and is very difficult of explanation. Humboldt, who knew neither the Latin text nor the text of the *Historie* which he had not succeeded in procuring (*Examen critique*, vol. I., pp. 209 and 237), thought the figure 150 miles was exact, and devoted himself to a laborious critical argument on the subject, all his conclusions thereon naturally being erroneous (*loc. cit.*, I., pp. 234 and 289).

[33] The Spanish and Italian versions add, the one: which are 25 leagues, the other: which make 35 leagues. The figure 3 of the Italian text is evidently a printer's error, for 100 Italian miles certainly make 25 leagues. Humboldt says that the circumference of 100 miles given to Quinsay is borrowed from Conti (*loc. cit.*, vol. I., p. 216), but in this he is mistaken. It is Marco Polo who gives Quinsay a circumference of 100 miles (Yule's edition, vol. II., p. 169. Yule writes the name: Kinsay). Conti only assigns 30 miles to Quinsay (Major's edition, p. 15).

[34] The Spanish version adds: of marble; this the Italian repeats. Marco Polo says 12,000 bridges (*loc. cit.*), Odoric says the same thing. Conti makes no reference to bridges. The reduction of Marco Polo's 12,000 bridges to only 10 is clearly an error on the part of the copyist, for all the other details recorded about Quinsay in this letter come from Marco Polo.

[35] "The most noble city of Kinsay," a name which is as much as to say in our tongue, "The City of Heaven" (Yule's *Marco Polo*, vol. II., p.

of the multitude of its works[36] and its resources. This space is almost a third part of the whole sphere.[37] This city is in the

169). On the copy he possessed of the Latin edition of Marco Polo Columbus notes this detail in the margin, as also the references to the circuit of the town and its bridges. See notes 238 and 240 reproduced in the *Raccolta*, volume *Scritti di Colombo.* The Marco Polo, annotated by Columbus, belongs to the first Latin edition printed at Antwerp about 1485 (Brunet). Quinsay comes from King-sse, which means in Chinese "capital." It is the present Hang-Chau (V. de Saint-Martin).

[36] Instead of "works" one might substitute "art treasures," the Latin expression bearing this rendering ; but the mention of resources immediately afterwards suggest rather works in the sense of factories or industrial establishments. The first Spanish translator so understood the word and translates it by "*artificios*" ; the Italian translator is still further precise by saying "*fabriche.*"

[37] *A third part of the whole sphere.*—Here undoubtedly we have a transposition. This phrase, which is meaningless here, finds its logical place after the description of Cipangu and the phrase : "Thus by the unknown ways," etc. It is not the province of Quinsay that forms a third part of the whole sphere, but the maritime space which separates the two extremities of the globe.

It is not devoid of interest to remark here that this phrase, which in two lines sums up the whole cosmographical system on which Columbus based the opinion that by taking to the west one should reach the eastern shores of Asia, merely renders the particular views of Marinus of Tyre on the wide extention eastward of the Asiatic Continent. It has been shown in the First Part, chap. iv., § 4, that in its essential points the map which accompanied the letter to Martins was nothing more than a reduction to a graphic form of the notions of Marinus of Tyre. But, and this is curious to observe, while the author of the letter does not name this cosmographer, and even appears to be drawing from his own knowledge all that he says, Columbus himself knew him well, and in no way hesitates to attribute to him all the opinions contained in the letter to Martins. Las Casas in chapter v. of his First Book, which forms chapter vi. of the *Historie* of Ferdinand Columbus, a chapter written in order to give the scientific reasons which fixed Columbus' resolution, develops the two fundamental arguments of his system, namely : the sphericity of the earth, whence arises the possibility to circumnavigate it, and the smallness of the space yet remaining to accomplish this periplus. Columbus, says Las Casas, knew that the space separating the end of Asia from the Cape de Verde Islands could not be more than the third of the sphere, because Marinus (of Tyre) had already described the countries of the East which extend to the fifteenth hour of the twenty-four hours of the globe's daily rotation. Further on Las Casas, who is still explaining Columbus' views, says that the

province of Mangi,[38] that is to say, nigh unto the province of Katay,[39] wherein is the royal residence of the country. But from the island of Antilia,[40] which is known to you, unto the most

Discoverer thought Marinus may not have known the farthest extremity of the Eastern Continent, and that it was reasonable to suppose this extremity would be found even still further eastward, a fact which consequently must bring it so much the nearer to our west (Las Casas, *História*, Book I., chap. v., vol. I., p. 56. In the *Historie*, all the beginning of chapter vi.). Thus Columbus knew Marinus of Tyre, from whom Toscanelli, or whoever was the author of the letter to Martins, had borrowed his figures—the only thing of some interest in the letter—on the distance he must cross in order to reach the coasts of Asia by sailing to the west. (See on this point § 4 of chapter iv. of the First Part, and § 11 of chapter i. of the Second Part.)

[38] Mangi or Mangy (Pauthier) or Mazi (Yule). This is Southern China. It contained, says Marco Polo, nine kingdoms, of which Quinsay was one (Yule's edition, vol. II., p. 169). It is from Marco Polo that we get the division of China into Cathay or Northern China and Mangi or Southern China. This last name is a corruption of that of *Man-Tseu:* the barbarians; a name the Northern Chinese gave to those of the South. M. Cordier has quoted a great number of texts which establish this derivation (*Odoric*, p. 248, note 2). On his fourth voyage Columbus fancied he had reached that part of China: "On the 13th of May I reached the province of *Mayo*, which is contiguous to that of Cathay" (Letter of 7th July 1503, Major's edition, p. 194).

[39] The Spanish version says "city of Cathay." The Italian version restores the word province.

[40] *Antilia.*—The Latin text says simply: which is known to you (*vobis nota*). The Spanish version turns this into: "that which you call Seven Cities—whereof we have information" (*que vosotros llamais de Siete Ciudades, de la cual tenemos noticia*). The Italian version maintains the interpolation, but comes closer to the Latin text by saying: "which you call of the Seven Cities, of which you have information" (*Che voi chiamate di sette città, della quale havete noticia*). Barcia suppresses the phrase.

Thus Toscanelli is supposed to have known and to have written that the Portuguese were acquainted with the island of Antilia, and his Spanish translator takes it on himself to define and round off this assertion by making the learned Florentine say that these same Portuguese gave to the island a particular name! How came Toscanelli, who had never travelled, and whose whole time was taken up in the practice of his art and in exercises of devotion, to be acquainted with these things peculiar to the Portuguese? No effort is made to explain this difficulty; but it is curious to notice that Columbus knew

noble island of Cippangu[41] there are 10 spaces.[42] For that island is most fertile in gold and in pearls and gems, and they cover the temples and the royal houses with solid gold. Thus by the unknown ways there are not great spaces of the sea to be passed.[43] Many things perchance ought to be explained more

the fact referred to, for Las Casas tells us he learned from the Admiral's own writings that ancient sea-charts placed Antilia more than 200 leagues west of the Canaries and Azores, and that the Portuguese identified this island with the isle of the Seven Cities (*História*, Book I., chap. xiii., vol. I., p. 99).

[41] *Sypangu*—is the orthography of Pauthier's *Marco Polo;* Yule gives Chipangu: both are corruptions of the Chinese name for Japan, *—Ji-pen-koue* or *Zhi-pan-kwe—i.e.*, Kingdom of the Rising Sun. The Japanese themselves so call their country, but write and pronounce the name differently. In the first two syllables we find a variant of Nipon or Niphon, still the name of the largest island of the Japanese Archipelago. See Pauthier's *Marco Polo*, p. 537, note I, and Yule's edition, vol. II., p. 238. "Sypangu, says Marco Polo, is an island in the East in the high sea distant one thousand five hundred miles from the Continent; and it is a very great island" (Pauthier's edition, chap. clviii., p. 537). This information, together with the details Marco Polo gives of Kublai Khan's expedition against it, and the etymology of its name, leaves no doubt the reference is to Japan. This identification, so transparent in itself, has nevertheless been contested, very curious things having been said on the subject, but when closely investigated they are found to be without consistency. See Mr George Collingridge's Memoir: *The Early Cartography of Japan* in the *Geographical Journal* for May 1894. In the September number of the same journal will be found a note from Mr Kramp and a letter from Mr Yule, Oldham, refuting this opinion.

Ximenes believes the information contained in the letter to Martins, joined with that given by Marco Polo and Conti, led the Portuguese to the discovery of Japan in 1542. "Toscanelli," he adds, "would thus have contributed not only to the discovery of America, but also to that of Japan" (*loc. cit.*, note Y, xxii.). This assertion is absolutely baseless; the Portuguese, like the rest of the world, first knew of the so-called Toscanelli letter when it was published in the *Historie*, in 1571.

[42] The Spanish and Italian versions add: "which make 2500 miles, or 225 leagues." Here again we must suppose the copyist made a slip, and read 625 leagues, which make 2500 miles.

[43] The Spanish text thus renders this passage: "Thus the route being unknown, all these things are hidden, and one may go thither

openly. But for these things he that considereth diligently will be able to see the rest for himself.[44]

Farewell, beloved.

[illegible] The Italian says the same. This translation so differs [illegible] that one can scarcely credit it was [illegible] the Spanish translator.

[illegible] modified in the Spanish and Italian [illegible] might be said, but as I have already [illegible] and you are of excellent thought- [illegible] left for you to understand, and [illegible] more." Then follows the paragraph [illegible] demands," to which refer- [illegible]

APPENDIX B

THE SAME LETTER

LATIN Text from the Colombina, with a corrected Text in parallel columns, and a Philological Commentary thereon by M. Norbert Sumien translated into English.

It suffices merely to cast glance over the text of the letter to Martins, such as we possess it, to see that it is faulty. Either he who wrote it was ill acquainted with Latin, or the transcriber has strangely disfigured it. We shall not seek to assign responsibility for the faults and errors we are about to point out, for we make no pretence here to restore the original text. In order effectively to carry out such a work it would be absolutely necessary to possess some Latin writing by Toscanelli in order to serve as a standard of comparison ; but, notwithstanding careful research, we have failed to find any letter or work in our public libraries that comes from the pen of the learned Florentine. We shall therefore content ourselves with correcting the text, clearing it of the ambiguous expressions and solecisms which disfigure and obscure it, without specially occupying ourselves with whether they come from the author or the copyist. It was to be feared that this letter might issue transformed by a too scrupulous work of correction ; we have therefore closed our eyes to certain instances of slovenliness of style, and of certain outlandish expressions, the suppression of which would have made the letter lose some special characteristic without thereby rendering clearer

the text. As regards the corrupt passages, we have sought to restore them by taking as our guide good sense, grammar, and, as often as we thought we could do so without danger, the two ancient translations we possess.

COLOMBINA TEXT.	CORRECTED TEXT.
Copia misa christofaro colonbo per paulum fixicum cum una carta nauigacionis.[1]	Copia missa Christophoro Colombo a Paulo, physico, cum charta navigationis.
Ferdinando martini canonico vlixiponensi paulus phisicus salutem. de tua valitudine de gratia et familiaritate cum rege vestro generosissimo magnificentissimo principe iocundum mihi fuit intelligere.	Ferdinando Martini, canonico Ulyssiponensi, Paulus, physicus, salutem. De tua valetudine, de gratia et familiaritate cum rege vestro, generosissimo et magnificentissimo principe, jucundum mihi fuit intelligere.
Cum tecum allias locutus sum de breviori via ad loca aromatum per maritimam nauigacionem quam sit[2] ea quam facitis[3] per guineam querit nunc serenissimus rex a me quandam declaracionem ymo	Cum tecum alias locutus sum de breviori via ad loca aromatum, per maritimam navigationem, quam sit ea quam facitis per Guineam, quærit nunc Serenissimus rex a me quamdam declarationem, imo

[1] This heading, written later and by another hand than the letter, is French, Italian, Spanish, what you will, but not Latin. *Copia* is a foreign word, it is true, but it may be retained, for it is impossible to misunderstand its meaning. The same does not apply to *per paulum*. Notwithstanding the use the Vulgate and certain ecclesiastical writers have made of the preposition *per* as complement to the passive verb, *per paulum* does not signify *by Paul*, but *by the means of, by the intermediary of, Paul*. Finally, the Latins used *unus*, as it is here employed in *una carta*, more frequently in a bad sense; *cum una carta* would mean therefore *with a bad chart*. This is not what the author of the heading wished to convey.

Fixicum is for *physicum*.

[2] *Quam sit.*—That is to say, *quam fieri potest ut sit.*

[3] *Quam facitis.*—Not exactly *that you make*, but *that you are preparing, that you seek to open.*

COLOMBINA TEXT.

potius ad occulum ostensionem vt etiam mediocriter doti illam viam caperent et intelligerent.[4]

Ego autem quamvis cognoscam posse hoc ostendi per formam spericam vt est mundus tamen determinaui pro faciliori intelligencia ac etiam pro faciliori opere ostendere viam illam[5] per quam carte nauigacionis fiunt illud declarare.

Mito ergo sue Majestati cartam manibus meis factam in qua designantur litora vestra et insule ex quibus incipiatis[6] iterfacere versus occasum senper et loca ad que debeatis pervenire et quantum a polo vel

CORRECTED TEXT.

potius ad oculum ostensionem, ut etiam mediocriter docti illam viam caperent et intelligerent.

Ego autem quamvis cognoscam posse hoc ostendi per formam sphæricam, ut est mundus, tamen determinavi, pro faciliori intelligentia ac etiam pro faciliori opera via illa per quam chartæ navigationis fiunt illud declarare.

Mitto ergo suæ Majestati chartam, manibus meis factam, in qua designantur littora vestra et insulæ ex quibus vobis incipiendum erit iter facere versus occasum semper, et loca ad quæ vobis perveniendum, et quan-

[4] *Caperent et intelligerent.*—In order to understand these subjunctive imperfects we must understand *si res postularet, si occasio se daret.*

[5] *Ostendere viam illam.—Ostendere viam illam* and *illud declarare* mean the same thing; therefore they form a repetition. One of the two should disappear. We think *ostendere viam illam* should be eliminated. *Ostendere* appears to be an interpolation introduced into the text to account for the accusative *viam illam.* Did *viam illam* stand in the original text? For our part, we doubt it. The manuscripts usually mark the accusative by a horizontal line drawn above the vowel. But this line, in words of the first declension, like *viam illam*, might strictly only mark the length of the vowel, and consequently the ablative case, which some writers still write *viâ illâ.* With the ablative *viâ illâ* and eliminating *ostendere* the phrase is grammatically correct and the meaning becomes clear. *Viâ illâ* then no longer means *that road*, but *by that method* or *process.* What makes this emendation very plausible is that the idea of road is expressed at the beginning of the phrase by the neuter pronoun *hoc*, *hoc ostendi*, which naturally calls for *illud* at the end, *illud declarare.*

[6] *Incipiatis*, etc.—All these subjunctives, *incipiatis, debeatis pervenier*

COLOMBINA TEXT.	CORRECTED TEXT.
a linea equinotiali debeatis declinare et per quantum spacium scilicet per quot miliaria debeatis peruenire ad loca fertilissima omnium aromatum et gemarum, et non miremini si voco occidentales partes vbi sunt aromata cum communiter dicantur orientales quia nauigantibus ad occidentem semper ille partes inueniuntur per subterraneas nauigaciones.[7] Si enim per terram et per superiora itinera ad orientem senper reperirentur.[8]	tum a polo vel a linea æquinoctiali vobis declinandum sit, et per quantum spatium, scilicet, per quot milliaria perventuri sitis ad loca fertilissima omnium aromatum et gemmarum. Et non miremini, si voco occidentales partes ubi sunt aromata, cum communiter dicantur orientales, quia navigantibus per subterraneas navigationes ad occidentem semper illæ partes inveniuntur; si, enim, per terram et per superiora itinera, ad orientem semper reperientur.
linee ergo recte in longitudine carte signate ostendunt distanciam ab orientem[9] versus occidens[10] que autem transverse sunt ostendunt spacia a meridie versus septentrionem.	Lineæ ergo rectæ, in longitudine chartæ signatæ, ostendunt distantiam ab oriente versus occidentem, quæ autem transversæ sunt ostendunt spatia a meridie versus septentrionem,
notavi autem in carta diversa	Notavi autem in charta diversa

are wrongly used, and should be corrected; it is the same with the expressions *debeatis declinare* and *debeatis pervenire* which follow; they are weak, and do not express the thought of the author.

[7] *Per subterraneas navigationes.*—This complement is placed out of all regard to good sense. This has been done by some one evidently ignorant of Latin construction. Its position logically should follow immediately after *navigantibus.*

[8] *Reperirentur.*—Mr Harrisse justly corrects this imperfect subjunctive by the future *reperientur*, which undoubtedly gives a much more natural meaning.

[9] *Ab orientem.*—*Ab oriente* is required. Mr Harrisse has already made this correction.

[10] *Versus occidens.*—Analogy requires we should here write *occidentem.* The words *oriens* and *occidens* have been throughout treated as masculine.

COLOMBINA TEXT.	CORRECTED TEXT.
loca[11] ad que peruenire potestis[12] pro majori noticia nauigancium scilicet[13] ventis vel casu aliquo alibi[14] quam existimarent venirent partin autem vt ostendant incolis ipsos habere noticiam aliquam patrie illius	loca ad quæ pervenire possetis ; et hæc quidem pro majori notitia navigantium, si, ventis vel casu aliquo, alio quam existimarent venirent ; partim autem ut ostendant incolis ipsos habere notitiam aliquam patriæ illius,

[11] *Diversa loca.*—Meaning *outlying places.*

[12] *Potestis.*—This indicative has no business here, all this phrase being conditional. It should be *possetis*. Moreover it was so rendered in the two old translations of Las Casas and d'Ulloa.

[13] *Pro majori notitia navigantium scilicet.*—These few words, flung in here like a clumsy parenthesis, can only be the fragment of a phrase whose beginning has disappeared. To begin with, the adverb *scilicet* does not belong to it. This word, represented in Columbus' manuscript by a simple *s* between two points, is evidently a bad guess the copyist has substituted for the conditional *si* which ought to be here, its presence being absolutely required for understanding the rest of the phrase. It should therefore be restored. *Scilicet* having gone, the clause *pro majori notitia navigantium* remains isolated, lopped, and appears wholly foreign to the text. Nevertheless it does undoubtedly form a portion of it, for it is the first term of an enumeration of reasons of which *partim autem*, which follows, is the second. It is therefore one of two things : either these words are out of place and require moving in order to resume their true relation to the rest of the sentence, or they are mutilated, *i.e.*, they have lost those parts which grammatically entitled them to the place they occupy. Logic would seem to require them between *charta* and *diversa*, that is as near as possible to the verb *notavi*, to which logically they refer ; but the difference of persons of the verbs *possetis* on one hand, and *existimarent*, *venirent* on the other, refuse to permit of such displacement. The words *pro majori notitia navigantium* are therefore in their place, but they can only be there because primitively they must have been preceded by an expression recalling at once the verb *notavi* and marking the opposition between them and the clause *partim autem*. This expression should be either *et hæc quidem*, or *et ita quidem*, or some similar form. Thanks to these corrections the meaning becomes clear, grammar is satisfied, and the whole paragraph assumes a reasonable aspect.

[14] *Alibi.*—With a verb denoting movement like *venirent*, it is the correlative *alio* that should be employed.

COLOMBOS TEXT.	CORRECTED TEXT.
quod debebit esse iocundum satis. non considant [16] autem in insulis nisi mercatores.	quod debebit esse jucundum satis. Non considant autem in insulis nisi mercatores, asseritur.
asserit [16] ibi enim tanta copia nauigancium est cum mercimoniis vt in toto reliquo orbe non sint sicuti in uno portu nobilissimo vocato zaiton. asernit enim centum naues piperis magne [16] in eo portu [17] singulis annis deferri, sine aliis nauibus portantibus alia aromata.	Ibi enim tanta copia navigantium est cum mercimoniis, ut, in toto reliquo orbe, non sint sicuti in uno portu nobilissimo vocato Zaiton. Asserunt enim centum naves piperis magnas in eum portum singulis annis deferri, sine aliis navibus portantibus alia aromata.
patria illa est populatisima ditissima multitudine prouincia-	Patria illa est populatissima, ditissima multitudine provin-

[16] *Non considant autem in insulis nisi mercatores asserit.*—The copyist has not understood this passage, for he throws *asserit* into the next phrase of which this verb cannot form part. *Asserit ibi enim* is not Latin, *enim* being always required to follow the first word of the phrase. *Ibi enim* is the beginning of the next phrase. *Asserit* must therefore throw back and join itself to the end of the preceding phrase. But as it stands there *asserit* means nothing. Harrisse changes it into *asseritur*; we fully agree with this correction. He is less happy in changing *considant* into *considant*; we do not approve of it. What led him to it was that this subjunctive appeared to him to be of doubtful Latinity. It is also our opinion, though none the less we think it belonged to the original text, for it has an Italian aroma that may well have deceived the author of the letter. The Italians are accustomed to say: *che non vi sieno però stabiliti nell' isole se non mercanti, si dice.* The phrase *non considant autem in insulis nisi mercatores, asseritur*, is a literal rendering of the Italian phrase. In order to Latinise it, it would have sufficed to transform *non considant* into the infinitive *non considere*. This error is all the more surprising, because the same expression recurs a few lines lower and on this occasion under its regular form: *asserunt enim centum naves . . . deferri.*

[16] *Magne.*—A nominative in an infinitive proposition has never been seen: it should be *magnas*.

[17] *In eo portu.*—Equally inadmissible is *in* and the ablative with a verb of movement: *eum portum* is required.

COLOMBINA TEXT.

rum et regnorum et ciuitatum sine numero. sub uno principe qui dicitur magnus kan quod nomen significat in latino rex regum. cujus sedes et residencia est vt plurimum in prouincia katay.

antiqui sui[18] desiderabant consorcium christianorum iam sunt 200 anni miscerunt[19] ad papam et postulabant plurimos dotos in fide vt illuminarentur. sed qui missi sunt inpediti in itinere redierunt.

etiam tempore Eugenii venit unus ad eugenium qui de beniuolentia magna erga christianos afirmabat et ego secum[20] longo sermone locutus sum de multis, de magnitudine edificiorum regalium et de magnitudine fluvium[21] in[22] latitudine et longitudine mirabili et de multitudine ciuitatum in ripis fluuium[21]

CORRECTED TEXT.

ciarum et regnorum et civitatum sine numero, sub uno principe qui dicitur Magnus Kan, quod nomen significat in latino rex regum ; cujus sedes et residentia sunt ut plurimum in provincia Katay.

Ejus antiqui desiderabant consortium christianorum. Jam sunt 200 anni miserunt ad papam et postulabant plurimos doctos in fide ut illuminarentur ; sed qui missi sunt, impediti in itinere, redierunt.

Etiam tempore Eugenii venit unus ad Eugenium, qui de benevolentia magna erga Christianos affirmabat. Et ego cum eo longo sermone locutus sum de multis, de magnitudine ædificiorum regalium et de magnitudine fluviorum, latitudine et longitudine mirabili, et de multitudine civitatum in ripis

[18] *Antiqui sui.*—The Latins only employed the possessive adjective *suus*, *sua*, *suum* when the possessor and the thing possessed occurred in the same sentence. *Ejus* is here wanted.

[19] *Miscerunt* is a corruption for *miserunt.* Harrisse has already made this correction.

[20] *Secum.*—This reflexive pronoun has no business here : it should be *cum eo.*

[21] *Fluvium.*—Harrisse sees in *fluvium* a corruption of *fluminum.* We are not of his opinion. We rather favour a clumsy abbreviation of *fluviorum.* Indeed, further on we shall find *artificium* for *artificiorum.*

[22] *In latitudine.*—This *in* is contrary to the genius of the Latin tongue. In Latin greatness in breadth and length is breadth and length. *In*

COLOMBINA TEXT.	CORRECTED TEXT.
vt in vno flumine 200 e[23] ciuitates sint constitute et pontes marmorei magne latitudinis et longitudinis vndique colonpnis[24] ornati.	fluviorum, ut in uno flumine 200 circiter civitates sint constitutæ, et pontes marmorei, magnæ latitudinis et longitudinis undique columnis ornati.
hec patria digna est vt per latinos[25] queratur non solum quia lucra ingencia ex ea capi posunt auri et argenti gemarum omnis generis et aromatum que nunquam ad nos deferuntur. Verum propter doctos viros philosofos et astrologos peritos et quibus[26] ingeniis et artibus	Hæc patria digna est ut a Latinis quæratur non solum quia lucra ingentia ex ea capi possunt auri et argenti, gemmarum omnis generis et aromatum quæ nunquam ad nos deferuntur, verum propter doctos viros, philosophos et astrologos peritos, et quorum ingeniis et

must be omitted, and *latitudine et longitudine mirabili* become merely a laudatory complement.

[23] *e.*—Columbus' manuscript has here an *e* which the authors of the *Raccolta Colombiana* have been unable to explain. Harrisse thinks it is a corruption of *c* standing for *circiter*. Unable to propose anything better we adopt this conjecture.

[24] *Colonpnis.*—A corruption of *Columnis.*

[25] *Per latinos.*—See note 1.

[26] *Et quibus ingeniis et artibus*, etc.—Harrisse gives a limited meaning to all this passage which we cannot approve. Starting with the subjunctives *gubernentur* and *conducant*, which he tries to explain, he imagines a principal phrase which nothing warrants, and places these subjunctives in dependence on it. According to him the text should say that it is desirable to enter into relation with the learned men, the philosophers, because *they might teach us* by what methods so powerful a province is governed, etc. It is self-evident that when one seeks to enter into relations with scholars, whoever they may be, it is to profit by their learning, whatever it may be; but not for the purpose of requesting them to give a reply to a precise question to which it might be impossible for them to answer. Harrisse has committed the error of taking as the basis for his interpretation two words which are clearly defective, since one *gubernentur* is in the plural, while its subject is in the singular, and the other is in the active while the first is passive, although they are in grammatical agreement with one another. If these two words are defective in one respect, there

COLOMBINA TEXT.	CORRECTED TEXT.
ita[27] potens et magnifica prouincia gubernentur ac etiam bella conducant.	artibus illa potens et magnifica provincia gubernatur ac etiam bella conducuntur.
Hæc pro aliquantula satisfa [cione] ad tuam[28] peticionem quantum brevitas temporis dedit et occupaciones mee concepscerunt[29] paratus in futurum regie maiestati quantum[30] volet latius satisfacere. Data florencie 25 iunii 1474.	Hæc pro aliquantula satisfactione ad tuam petitionem, quantum brevitas temporis dedit et occupationes meæ concesserunt, paratus in futurum regiæ Majestati, quanto voluerit latius, satisfacere. Data Florentiæ 25 junii 1474.

is no reason why at the same time they should not be also so in another; and, for our part, we are strongly inclined to believe not only should *gubernentur* be put in the singular, as Harrisse suggests, but also that it should be in the indicative *gubernatur;* not only should *conducant* be made passive, but that, like *gubernatur*, it should also be in the indicative *conducuntur*. These two corrections necessarily entail that *quibus* should become *quorum*, and the two prepositions formed by *gubernatur* and *conducuntur* become simple attributive complements of the same kind as *peritos*. The meaning thus obtained becomes much more natural, logical, and clearer than the one proposed by Harrisse. Moreover it conforms, within trifling limits, to the reading of the two ancient translations of Las Casas and the *Istorie*.

[27] *Ita*.—The two ancient translations read *illa* instead of *ita*. The words so closely resemble each other that it was easy for the confusion to arise. Furthermore the change of *ita* into *illa* becomes necessary following the corrections we have made in this passage.

[28] *Tuam*.—Harrisse here reads *suam;* he has not noticed in the manuscript that the scribe has himself corrected into *t* the *s* he had first written. Furthermore, Harrisse's reading cannot be accepted for two reasons: first, it is grammatically impossible to put thus without preparation a possessive adjective referring to a subject, in this case king, which has been forcibly lost sight of, since it has not been mentioned from the beginning of the letter. But, furthermore, the excuse made by the writer, at the most barely permissible if addressed to a friend, to an equal, becomes simply an impertinence if directly addressed to the king. Therefore we stick to *tuam*.

[29] *Concepscerunt*.—A corrupt word which with Harrisse we correct into *concesserunt*.

[30] *Quantum*.—Before the comparative *latius* this word should be altered into *quanto*.

COLOMBINA TEXT.

A ciuitate vlixiponis[31] per occidentem in directo sunt 26 spacia in carta signita quorum quodlibet habet miliaria 250 usque ad nobilisim[am] et maximam ciuitatem quinsay circuit enim centum miliaria et habet pontes decem et nomen eius sonat cita del cielo ciuitas celi et multa miranda de ea narrantur de multitudine artificium[32] et de reditibus. hoc spacium est fere tercia pars tocius spere. que ciuitas est in prouincia mangi scilicet vicina prouincie katay in qua residencia terre regia est.

Sed ab insula antilia vobis nota ad insulam nobilisimam cippangu sunt decem spacia est enim illa insula fertilisima aur[o]. margaritis et gemmis, et auro solido cooperiunt templa et domos regias itaquod[33] per ygnota itinera non magn[a] maris spacia transeundum. multa fortasse essent aperitus[34]

CORRECTED TEXT.

A civitate Ulyssipone per occidentem in directo sunt 26 spatia in charta signata, quorum quodlibet habet milliaria 250 usque ad nobilissimam et maximam civitatem Quinsay. Circuit enim centum milliaria, et habet pontes decem, et nomen ejus sonat *citta del cielo*, civitas cæli, et multa miranda de ea narrantur, de multitudine artificiorum et de reditibus. (Hoc spatium est fere tertia pars totius sphæræ.) Quæ civitas est in provincia Mangi, scilicet, vicina provinciæ Katay in qua residentia terræ regia est.

Sed ab insula Antilia, vobis nota, ad insulam nobilissimam Cippangu sunt decem spatia. Est enim illa insula fertilissima auro, margaritis et gemmis, et auro solido cooperiunt templa et domos regias. Itaque per ignota itinera non magna maris spatia transeundum; multa fortasse essent apertius declar-

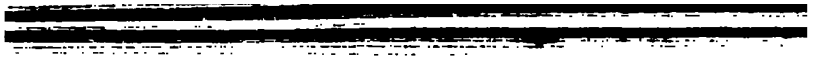
[31] *Ulixiponis.*—A constant custom requires that a proper name placed as here in dependence on a common noun should be put in the same case as that noun.

[32] *Artificium* is for *artificiorum.* The abbreviation is the same as we noticed in note 21.

[33] *Itaquod.*—A corruption for *itaque.*

[34] *Aperitus.*—Also a corruption for *apertius*, as Harrisse has already shown.

COLOMBINA TEXT.	CORRECTED TEXT.
declaranda sed diligens considerator per hec poteri[t] ex se ipso reliqua prospicere. vale dilectisime.	anda, sed diligens considerator per hæc poterit ex se ipso reliqua prospicere. Vale dilectissime.



APPENDIX C

THE SAME LETTER

SPANISH Version of Las Casas (*História de las Indias*, vol. I., Book I., chap. xii., p. 93), with an English Translation.

SPANISH.

Mucho placer hobe de saber la privanza y familiaridad que tienes con vuestro generosisimo y magnificentisimo Rey, y bien que otras muchas veces tenga dicho del muy breve camino que hay de aqui a las Indias, adonde nace la especieria, por el camino de la mar mas corto que aquel que vosotros haceis para Guinea, dicesme que quiere agora S. A. de mi alguna declaracion y á ojo demonstracion, porque se entienda y se pueda tomar el dicho camino; y aunque conozco de mi que se lo puedo monstrar en forma de esfera como está el mundo, determiné por mas fácil obra y mayor in-

ENGLISH.

I have had pleasure in learning of the favour and condescension which you enjoy from your most liberal and most magnificent King, and though I have other ofttimes spoken of the very short route which there is hence to the Indies where the spices grow — a shorter sea-route than that which you take for Guinea— you tell me that His Highness now demands of me a statement and ocular demonstration in order that the said route be understood and taken; and though I, for my part, know that I can show it him in the form of a globe (such as the world is), I have resolved—it

SPANISH.

teligencia monstrar el dicho camino por una carta semejante à aquellas que se hacen para navegar, y ansi la invio a S. M. hecha y debujada de mi mano ; en la cual está pintado todo el fin del Poniente, tomando desde Irlanda al Austro hasta el fin de Guinea, con todas las islas que en este camino son, en frente de las cuales derecho por Poniente está pintado el comienzo de las Indias con las islas y los lugares adonde podeis desviar para la linea equinoccial, y por cuánto espacio, es à saber, en cuántas leguas podeis llegar a aquellos lugares fertilisimos y de toda manera de especieria y de joyas y piedras preciosas ; y no tengais a maravilla si yo llamo Poniente adonde nace la especieria, porque en comun se dice que nace en Levante, mas quien navegáre al Poniente siempre hallará las dichas partidas en Poniente, é quien fuere por tierra en Levante siempre hallara las mismas partidas en Levante.

Las rayas derechas que estan en luengo en la dicha carta amuestran la distancia que es de Poniente à Levante ; las

ENGLISH.

being a simpler task and of easier comprehension—to show the said route on a map such as those made for navigating, and thus I send it to H.M. made and drawn by my hand : whereon is given all the extremity of the west, starting from Ireland southwards to the end of Guinea, with all the islands that are on this route, opposite which [islands] due west is the beginning of the Indies with the islands and places whither you can deviate by the equinoctial line, and for what distance—that is to say, in how many leagues you can reach those places most rich in all manner of spice, and of jewels, and of precious stones ; and be not amazed if I call west [the place] where the spice grows, for it is commonly said that it grows in the east, yet whoso steers west will always find the said parts in the west, and whoso goes east overland will find the same parts in the east.

The straight lines which are lengthwise on the said map show the distance that there is from west to east ; the others

SPANISH.

otras que son de través amuestran la distancia que es de septentrion en Austro. Tambien yo pinté en la dicha carta muchos lugares en las partes de India, adonde se podria ir aconteciendo algun caso de tormenta o de vientos contrarios o cualquier otro caso que no se esperase acaecer y tambien porque se sepa bien de todas aquellas partidas, de que debeis holgar mucho.

Y sabed que en todas aquellas islas no viven ni tractan sino mercaderes, avisandoos que alli hay tan gran cantidad de naos, marineros, mercaderes con mercaderias, como en todo lo otro del mundo, y en especial en un puerto nobilisimo llamado Zaiton, do cargan y descargan cada año 100 naos grandes de pimienta, allende las otras muchas naos que cargan las otras especierias.

Esta patria es populatisima, y en ella hay muchas provincias y muchos reinos y ciudades sin cuento debajo del Señorio de un Principe que se llama Gran Khan, el cual nombre quiere decir en nuestro romance, Rey de los Reyes, el asiento

ENGLISH.

which are crosswise show the distance from north to south. I have also given on the said map many places in the extent of India, whither one might go should there befall some mischance of storm or of head winds or any other hap that betided unforeseen, and also in order that all these parts may be well known, whereof you should much delight.

Know likewise that in all those islands there live and traffic none but merchants, bearing in mind that there is there as great an assemblage of vessels, sailors, merchants, and merchandise as in all the rest of the world, and in particular at a most superb port named Zaiton, where 100 huge vessels of pepper load and unload yearly, besides the other numerous vessels carrying the other spices.

This land is very populous, and in it are many provinces and many kingdoms and cities out of number beneath the sway of a Prince called [the] Great Khan, which name, in our vernacular, means King of Kings; whose abode is for

SPANISH.

del cual es lo mas del tiempo en la provincia de Catayo. Sus antecesores desearon mucho de haber platica è conversacion con cristianos, y habiá doscientos años que enviaron al Sancto Padre para que enviase muchos sabios é doctores que les enseñasen nuestra fe, mas aquellos que el invió, por impedimento, se volvieron del camino; y tambien al Papa Eugenio vino un embajador que le contaba la grande amistad que ellos tienen con cristianos, è yo hablé mucho con él é de muchas cosas é de las grandezas de los edificios reales, y de la grandeza de los rios en ancho y en largo, cosa maravillosa, é de la muchedumbre de las ciudades que son allà à la orilla dellos, é como solamente en un rio son doscientas ciudades, y hay puentes de piedra mármol muy anchas y muy largas adornadas de muchas columnas de piedra marmol. Esta patria es digna cuanto nunca se haya hallado, é no solamente se puede haber en ella grandisimas ganancias è muchas cosas, mas aún se puede haber oro é plata é piedras preciosas é de todas maneras de especieria, en gran

ENGLISH.

the most time in the province of Cathay. His predecessors wished greatly to hold intercourse and converse with Christians, and some two hundred years ago they sent to the Holy Father [praying] that he would send them many wise men and doctors who might teach them our faith, but those whom he sent returned on the road, because of obstacle[s]; and likewise to Pope Eugenius came an ambassador who related unto him the great friendship that they bear to Christians, and I have talked much with him of many things, and of the vastness of the royal buildings, and of the vastness of the rivers in breadth and in length, a thing to marvel at, and of the multitude of cities which are there upon their banks, and how upon a single river there are two hundred cities, and there are marble bridges, very broad and very long, embellished with many marble columns. This land is as worthy as ever [can be] of being discovered, and not only may great gains and many things be had there, but there may be had even gold and

SPANISH.

suma, de la cual nunca se trae a estas nuestras partes ; y es verdad que hombres sabios y doctos, filosofos y astrólogos, y otros grandes sabios, en todas artes de grande ingenio, gobiernan la magnifica provincia é ordenan las batallas.

Y de la ciudad de Lisboa, en derecho por el Poniente, son en la dicha carta 26 espacios, y en cada uno dellos hay 250 millas hasta la nobilisima y gran ciudad de Quinsay, la cual tiene al cerco 100 millas que son 25 leguas, en la cual son 10 puentes de piedra mármol. El nombre de la cual ciudad en nuestro romance, quiere decir ciudad del cielo ; de la cual se cuentan cosas maravillosas de la grandeza de los artificios y de las rentas (este espacio es cuasi la tercera parte de la esfera), la cual ciudad es, en la provincia de Mango, vecina de la ciudad del Catayo, en la cual està lo mas del tiempo el Rey, é de la isla de Antil, la que vosotros llamais de Siete Ciudades, de la cual tenemos noticia, hasta la nobilisima isla

ENGLISH.

silver and precious stones, and all manner of spices in great profusion, whereof there is never any brought to these our parts ; and true it is that men wise and learned, philosophers and astrologers, and other great sages, of great accomplishment in all arts, govern the magnificent province and direct campaigns.

And from the city of Lisbon, straight to the west, in the said map are 26 spaces, and in each one of them there are 250 miles as far as the most superb and mighty city of Quinsay, which has a circumference of 100 miles, which are 25 leagues, wherein are ten bridges of marble. The name of which city in our vernacular means City of Heaven ; whereof are related marvels manifold concerning the dimensions of its manufactures and revenues (this space is almost the third part of the globe), which city is in the province of Mango, close to the city of Cathay, wherein the King mostly dwells, and from the island of Antilia — that which you call Seven Cities—whereof we have information, to the most superb

SPANISH.

de Cipango hay 10 espacios que son 2500 millas, es á saber 625 leguas, la cual isla es fertilísima de oro y de perlas y piedras preciosas.

Sabed que de oro puro cubrijan los templos y las casas reales; así que por no ser conocido el camino están todas estas cosas encubiertas, y á ella se puede ir muy seguramente. Muchas otras cosas se podrian decir, mas como os tenga ya dicho por palabra y sois de buena consideracion, sé que no os queda por entender, y por tanto no me alargo mas, y esto sea por satisfaccion de tus demandas cuanto la brevedad del tiempo y mis ocupaciones me han dado lugar; y ansi quedo muy presto á satisfacer y servir á S. A. cuanto mandare muy largamente.

Fecha en la ciudad de Florencia á 25 de Junio de 1474 años.

ENGLISH.

city of Cipango, there are ten spaces, which are 2500 miles, that is to say 625 leagues, which island is exceeding rich in gold and pearls and precious stones.

Know that they cover the temples and royal dwellings with pure gold: thus the route being unknown, all these things are hidden, and one may go thither very safely. Many other things might be said, but as I have already spoken to you by word of mouth and you are of excellent thoughtfulness, I know that there is naught left for you to understand, and in so much I expatiate no more. And may this satisfy your demands so far as the shortness of time and my pursuits allow; and thus I remain most ready to satisfy and serve His Highness to such extent as he may command.

Done in the city of Florence on the 25 of June of the year 1474.

APPENDIX D

SAME LETTER

ITALIAN Version of the *Historie*, fol. 16-18, with English Translation.

ITALIAN.	ENGLISH.
A Fernando Martinez canonico di Lisbona Paolo Fisico Salute.	To Fernam Martins, Canon of Lisbon, Paul the physician sends greeting.
Molto mi piacque intendere la domestichezza, che tu hai col tuo Serenissimo & Magnificentis. Rè, & quantunque molte altre volte io habbia ragionato del brevissimo camino, che è di quà all'Indie, dove nascono le specierie, per la via del mare, il quale io tengo piu breve di quel, che voi fate per Guinea, tu mi dici, che Sua Altezza vorrebbe hora da me alcuna dichiaratione, o dimostratione, accioche s'intenda, & si possa prendere detto camino.	It pleased me much to hear the familiarity thou dost enjoy with thy most serene and magnificent King, and though many other times I have discoursed of the shortest road there is from here to the Indies, where grow the spices, by way of the sea, the which I hold shorter than that which you make by Guinea, you tell me His Highness would now have from me some statement or demonstration so that it may be understood and whether it were possible to take the said way.

ITALIAN.

La onde, come ch'io sappia di poter ciò mostrarle con la sfera in mano, & farle veder, come sta il mondo ; nondimeno ho deliberato per piu facilità, & per maggiore intelligenza dimonstrar detto camino per una carta, simile a quelle, che si fanno per navigare.

E cosi la mando a sua Maestà, fatta e disegnata di mia mano nella quale è dipinto tutto il fine del Ponente, pigliando da Irlanda all' Austro infino al fin di Guinea con tutte le Isole, che in tutto questo camino giacciono ; per fronte alle quali dritto per Ponente giace dipinto il principio dell' Indie con le Isole, e luoghi, dove potete andare : e quanto dal Polo Artico vi potete discostare per la linea Equinoctiale, e per quanto spatio ; cióe in quante leghe potete giungere a quei luoghi fertilissimi d' ogni sorte di specieria, e di gemme, e pietre pretiose.

E non habbiate a maraviglia, se io chiamo Ponente il paese, ove nasce la specieria, la qual communemente dicesi che nasce in Levante : percioche coloro,

ENGLISH.

Wherefore, although I know I could show him that, globe in hand, and make him see it, as the world is, nevertheless I have decided for greater ease and for greater comprehension to demonstrate the said road by a chart like to those that are made for navigating.

And thus I send it to His Majesty made and drawn by my hand in which I have depicted all the extremity of the West taking from Ireland to the South, even to the end of Guinea with all the islands, which lie along the whole route, facing which directly westward lies depicted the beginning of the Indies with the islands and places whither you may go : and how much from the Arctic Pole you may deviate by the equinoctial line, and by how much space, that is to say in how many leagues you may reach to those places most rich in all kinds of spices, of gems and of precious stones.

And hold it not as a marvel if I call West the region where the spice grows, which it is commonly said grows in the East : for those who sail west-

ITALIAN.

che navigheranno al Ponente, sempre troveranno detti luoghi in Ponente; e quelli, che anderanno per terra al Levante, sempre troveranno detti luoghi in Levante.

Le linee dritte, que giacciono al lungo in detta carta, dismostrano la distanza, che è dal Ponente al Levante; le altre, che sono per obliquo, dimostrano la distanza, che è dalla Tramontana al Mezzogiorno.

Ancora io dipinsi in detta carta molti luoghi nelle parti dell' India, dove si potrebbe andare, avvenendo alcun caso di fortuna, o di venti contrarii, o qualunque altro caso, che non si aspettasse, che dovesse avvenire.

Ed appresso, per darvi piena informatione di tutti quei luoghi, i quali desiderate molto conoscere, sappiate, che in tutte quelle isole non habitano, ne pratticano altri, che mercatanti; avvertendovi, quivi essere cosi gran quantità di navi, e di marinari con mercatantie, come in ogni altra parte del mondo, specialmente in un porto nobilissimo, chiamato zaiton, dove caricano, e discaricano ogni anno cento navi grosse di pepe, oltre

ENGLISH.

ward will ever find the said places in the West; and those who go by land to the East will ever find the said places in the East.

The straight lines which lie lengthwise on the said map reveal the distance there is from west to east; the others which are slantingwise reveal the distance there is from the north to the south.

Furthermore I have depicted in the said map many places in the parts of India whither one might go, there bechancing some stroke of fortune or adverse winds or any other matter whatsover which though unexpected might befall.

And furthermore, to give you full information of all these places which you greatly desire to know, learn that in all these islands there dwell not, nor traffic, others than merchants; warning you that there there be a great multitude of ships and of sailors with merchandise as in all the other part of the world, chiefly in a most noble harbour, called Zaiton, where they load and unload every year one hundred large vessels

ITALIAN.

alle molte altre navi, che caricano altre specierie.

Questo paese è popolatisimo, e sono molte provincie, e molti regni, e città senza numero sotto il dominio di un Principe chiamato il Gran Cane, il qual nome vuol dire Rè de' Rè, la residenza del quale la maggior parte del tempo è nella provincia del Cataio.

I suoi antecessori desiderarono molto haver prattica e amicitia con Christiani, e gia dugento anni mandarono Ambasciatori al sommo Pontefice, supplicandolo, che gli mandasse molti savii e dottori, che gl'insegnassero la nostra fede, ma per gl'impedimenti, ch'ebbero detti Ambasciatori, tornanoro a dietro senza arrivare a Roma.

E ancora a Papa Eugenio IV venne uno Ambasciatore, il quale gli raccontò la grande amicitia, che quei Principi, e i loro popoli hanno co' christiani: E io parlai lungamente con lui di molte cose, e della grandezza delle fabriche regali, e della grossezza dei fiumi in larghezza, e in lunghezza, e ei

ENGLISH.

of pepper, besides other numerous ships which load other spices.

This country is most peopled, and there are many provinces, and many kingdoms and cities beyond number, under the rule of a prince called the Great Khan, which name means to say King of King, of whom the dwelling for the more part of the time is in the province of Cathay.

His forefathers greatly desired to have intercourse and friendship with Christians, and now two hundred years ago they sent ambassadors to the Sovereign Pontiff, begging him that he should send them many sages and doctors who might teach them our faith, but, by difficulties which befell these ambassadors, they turned back without reaching Rome.

And still to Pope Eugenius IV there came an ambassador, who told him of the great friendship which these princes and their peoples have with Christians: and I spake long with him of many things, and of the greatness of the royal factories and of the magnitude of the rivers in broadness and

ITALIAN.

mi disse molte cose maravigliose della moltitudine delle città, e luoghi, che son fondatti nelle rive loro, e che solamente in un fiume si trovano dugento città edificate con ponti di pietra di marmo, molto larghi, e lunghi adornati di molte colonne.

Questo paese è degno tanto, quanto ogni altro, che si habbia trovato ; e non solamente vi si può trovar grandissimo guadagno, e molte cose ricche ; ma ancora oro, e argento, e pietre pretiose, e di ogni sorte di specieria in grande quantità, della quale mai non si porta in queste nostre parti.

Ed è il vero, che molti huomini dotti, Filosofi, e Astrologi, e altri grandi savii in tutte le Arti, e di grande ingegno governano quella gran provincia, e ordinano le battaglie.

Dalla città di Lisbona per dritto verso Ponente sono in detta carta ventisei spatii, ciascun de' quali contien dugento e cinquanta miglia, fino alla nobilissima, e gran città di Quisai, la quale gira cento miglia, che sono trentacinque

ENGLISH.

in length, and he told me many wondrous things concerning the multitude of the cities and places which are raised upon their banks, and that alone on one river are found two hundred cities built with bridges of marble, very wide and long and adorned with many columns.

This country is as worthy as any other of being discovered, and not only there may be found great gain and many rich things, but also gold and silver, and precious stones, and of all kinds of spices in great quantities of which never is any brought into this our country.

And it is true that many learned men, philosophers, and astrologers, and other great scholars in all the arts and of great talent, govern this great province and wage war.

From the city of Lisbon direct westward there are on the said chart twenty-six spaces, each of which contains two hundred and fifty miles, even to the most noble and large city of Quinsay which embraces a hundred miles around, which

ITALIAN.

leghe; ove sono dieci ponti di pietra di marmo.

Il nome di questa città significa Città del cielo, della qual si narrano cose maravigliose intorno alla grandezza de gl'ingegni, e fabriche, e renditi. Questo spatio è quasi la terza parte della sfera. Giace questa città nella provincia di Mango, vicina alla provincia del Cataio, nella quale sta la maggior parte del tempo il Rè.

E dall' isola di Antilia, che voi chiamate di sette città, della quale havete noticia, fino alla nobilissima isola di Cipango sono dieci spatii che fanno due mila e cinquecento miglia, cioè dugento e venticinque leghe: la quale Isola è fertilissima d'oro, di perle, e di pietre pretiose.

E sappiate, che con piastre d'oro fino coprono i Tempii, e le case regali. Di modo che, per non esser conosciuto il camino, tutte queste cose si ritrovano nascoste, e coperte; e ad esse si può andar sicuramente.

Molte altre cose si potrebbono dire; ma, come io vi ho

ENGLISH.

make thirty-five leagues, where are ten bridges of marble.

The name of this city means City of Heaven; about which are told many wonders concerning the greatness of its engines, manufactories and revenues. This distance is nearly the third part of the sphere. This city lies in the province of Mangi, nigh to the province of Cathay, within which remains the greater part of the time the King.

And from the island of Antilia, which you call of the Seven Cities, of which you have information, even to the most noble island of Cipangu are ten spaces, which make two thousand five hundred miles, that is to say two hundred and twenty-five leagues: which island is most rich in gold, pearls, and precious stones.

And know that with plates of fine gold they cover the temples and the royal dwellings. In so much that, through this route not being known, all these things remain hidden and veiled, and to them one may go boldly.

Many other things might be told; but, as I have for-

ITALIAN.

gia detto à bocca, e voi siete prudente, e di buon giudicio, mi rendo certo, che non vi resta cosa alcuna da intendere: e però non sarò più lungo.

E questo sia per sodisfactione delle vostre richieste, quanto la brevità del tempo e le mie occupationi mi hanno concesso.

E cosi io resto prontissimo à sodisfare, e servir sua Altezza compiutamente in tutto quello, che mi commanderà.

Da Fiorenza, à xxv Giugno, dell' anno MCCCCLXXIIII.

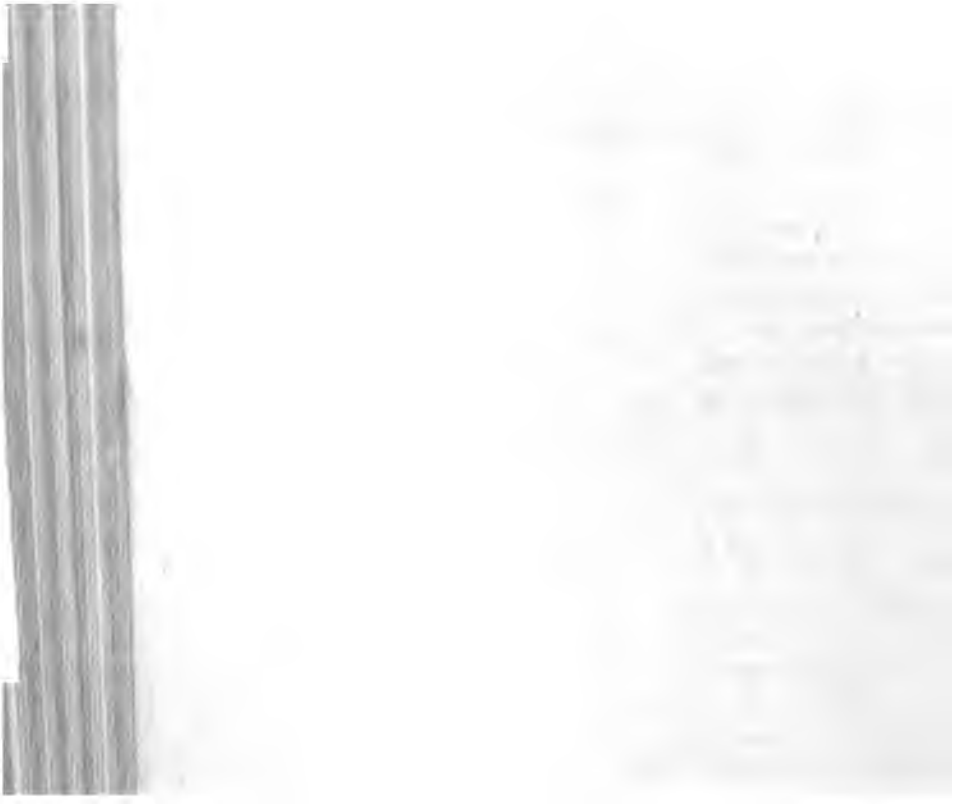
ENGLISH.

merly told you by word of mouth, and you are foreseeing and of good judgement, I am sure nothing remains to be explained to you: and therefore I will not further dilate.

And this may be for satisfaction of your request, as much as the shortness of the time and my occupations have permitted me.

And thus I remain most ready to satisfy and serve His Highness fully in all wherein he may command me.

Given at Florence, the xxvth June, of the year MCCCCLXXIIII.



APPENDIX E

TOSCANELLI'S LETTERS TO COLUMBUS, TEXTS AND TRANSLATIONS

FIRST LETTER

Covering note of a copy of the letter to Martins. (No date.)

Sources.—Columbus is supposed to have heard that Toscanelli interested himself in the route to the Indies, and thereupon to have requested Toscanelli to give him some information on the subject. It is then further supposed that the Florentine doctor sent Columbus a copy of his letter to Martins, accompanying it with the few lines which follow. (See above, First Part, chap. i., § 5.)

The original text, supposed to have been in Latin, is lost. Contemporary Spanish version, announced as being made on the Latin; in Las Casas, *História*, vol. I., chap. xii., p. 92. Italian version, also contemporary, but probably made on the above Spanish version: *Historie*, chap. viii.

French Translations.

Cotolendy, 1681.—*La vie de Chris. Colomb* (translated from the *Historie*), vol. I., pp. 20-21. Translation of the Italian text.

Urano, 1824.—*Hist. de Chris. Colomb*, of Bossi. French translation, pp. 194-195. Translation of the Italian text.

Muller, 1879.—*Hist. de la vie, etc., de Ch. Colomb.* Corrected edition of Cotolendy's version of the *Historie*, p. 26. Translation of the Italian text.

GAFFAREL, 1892.—*Hist. de la découverte de l'Amérique*, vol. I., p. 34. Translation of the Spanish text.

ENGLISH TRANSLATIONS.

THE HISTORY OF THE LIFE, ETC., 1746.—Translated from the *Historie*, in Churchill's Collection of Voyages, vol. II., p. 567. Translation of the Italian text.

FISKE, 1892.—*The Discovery*, etc., vol. I., p. 356. Translation of the Italian text.

MARKHAM, 1893.—*The Journal of Columbus*, etc., pp. 3-4. Translation of the Spanish text.

SPANISH TRANSLATIONS.

Those copied in Las Casas come directly from the Latin. Barcia, who has included the *Historie* in his collection (*Historiadores*), translates back Toscanelli's letters from the Italian into Spanish. Navarrete, who nevertheless could have made use of Las Casas' text, has placed Barcia's translation in his collection (*Viages*, vol. I.).

LAS CASAS' SPANISH VERSION.

(*Historia*, Book I., chap. xii., vol. I., p. 92), and English Translation.

SPANISH.	ENGLISH.
A Cristobal Columbo, Paulo, fisico, salud :	To Christopher Columbus, Paul, the physician, health :
Yo veo el magnifico y grande tu deseo para haber de pasar adonde nace la especieria, y por respuesta de tu carta te invio el traslado de otra carta que ha dias yo escribí a un amigo y familiar del Serenisimo Rey de Portugal, ántes de las guerras	I notice the splendid and lofty desire thou hast to journey whither grow the spices, and as answer to thy letter I send thee a copy of another letter I wrote some time back to a friend and servant of the Most Serene King of Portugal, before the

SPANISH.

de Castilla, a respuesta de otra que por comision de S.A. me escribió sobre el dicho caso, y te invio otra tal carta de marear, como es la que yo le invié, por la cual seràs satisfecho de tus demandas; cuyo treslado es el que sigue.

ENGLISH.

wars of Castille, in reply to another which by command of H.H. he wrote me on the said matter, and I send thee another such chart for navigating as is the one I sent him, by which thou shalt be satisfied of thy request; which copy is the one following.

ITALIAN VERSION OF THE *HISTORIE*.

Historie, fol. 16 recto, and English Translation.

ITALIAN.

A Christoforo Colombo, Paolo, fisico, salute:

Io veggo il nobile, e gran desiderio tuo di voler passar là, dove nascono le specierie.

Onde per risposta d'una tua lettera ti mando la copia d'un' altra lettera, che alquanti giorni fa io scrissi ad un mio amico, domestico del sereniss. Ré di Portogallo, avanti le guerre di Castiglia, in risposta d'un' altra, che per commissione di sua Altezza egli mi scrisse sopra detto caso: e ti mando un'altra carta navigatoria, simile a quella, ch'io mandai a lui, per la quel resteran sodisfatte le tue dimande. La copia di quella mia lettera è questa:

ENGLISH.

To Christopher Columbus, Paul the physician, health:

I see thy noble and great desire to wish to go there, where grow the spices.

Wherefore in reply to a certain letter of thine, I send thee a copy of another letter which some time ago I wrote to my friend, a servant of the Most Serene King of Portugal, before the wars of Castille, in answer to another, which by command of His Highness he wrote me on this matter; and I send thee another navigating chart, like to the one which I sent unto him, wherewith thy demands may remain satisfied. The copy of that letter of mine is this:

SECOND LETTER.

In answer to several letters from Columbus which no longer exist. Without date, but necessarily anterior to May 1482, the date of Toscanelli's death.

Sources.—The original text, supposed to have been written in Latin, is lost. A contemporary Spanish version made on the Latin (Las Casas, *História*, vol I., pp. 95-96). A later Italian version, made probably on the Spanish text. (*Historie*, fol. 18 verso and 19 recto.)

French, English, and Spanish translations to be found after the first letter.

See the bibliographical notices above.

We call the attention of the critics to this remarkable letter, which is merely an abridgement of the one to Martins, of which it would appear to have been a rough draft or first proof.

SPANISH VERSION OF LAS CASAS.

SPANISH.	ENGLISH.
A Cristobal Columbo, Paulo, fisico, salud :	To Christopher Columbus, Paul, the physician, health :
Yo rescibi tus cartas con las cosas que me enviaste, y con ellas rescibi gran merced. Yo veo el tu deseo magnifico y grande a navegar en las partes de Levante por las de Poniente, como por la carta que yo te invio se amuestra, la cual se amostrara mejor en forma de esfera redonda, pláceme mucho sea bien entendida ; y que es el dicho viaje no solamente	I have received thy letters with the things thou didst send me, and with them I received a great favour. I notice thy splendid and lofty desire to sail to the regions of the east by those of the west, as is shown by the chart which I send you, which would be better shown in the shape of a round sphere ; it will please me greatly, should it be understood ; and that not

SPANISH.

posible, mas que es verdadero y cierto è de honra è ganancia inestimable y de grandisima fama entre todos los cristianos.

Mas vos no lo podreis bien conoscer perfectamente, salvo con la experiencia ò con la platica, como yo la he tenido copiosisima, è buena è verdadera informacion de hombres magnificos y de grande saber, que son venidos de las dichas partidas aqui en corte de Roma, y de otros mercaderes que han tractado mucho tiempo en aquellas partes, hombres de mucha auctoridad.

Asi que cuando se hara el dicho viaje serà à reinos poderosos è ciudades e provincias nobilisimas, riquisimas de todas maneras de cosas en grande abundancia y a nosotros mucho necesarias, ansi como de todas maneras de especieria en gran suma y de joyas en grandisima abundancia.

Tambien se irà à los dichos Reyes y Principes que estan muy ganosos, mas que nos, de haber tracto è lengua con cristianos destas nuestras partes, porque grande parte dellos son cristianos, y tambien por haber

ENGLISH.

only is the said voyage possible, but it is sure and certain, and of honour and countless gain, and of the greatest renown among all Christians.

But you will not be able to understand it thoroughly except with experience or discussion, as I have had most fully, and good and true information of mighty men and of great learning, who have come from the said regions here to the Court of Rome, and of other merchants who have long trafficked in those parts, men of great authority.

So that when the said journey occurs, it will be to powerful kingdoms and most noble cities and provinces, most rich in all manner of things in great abundance and very necessary to us, as also in all kinds of spices in great quantity, and of jewels in the largest abundance.

It will also be to the said kings and princes who are very desirous, more than we are, to have dealing and speech with Christians from our parts, for a great number of them are Christians, and also to have

SPANISH.	ENGLISH.
lengua y tracto con los hombres sabios y de ingenio de aca, ansi en la religion como en todas las otras ciencias, por la gran fama de los imperios y regimientos que han destas nuestras partes; por las cuales cosas todas y otras muchas que se podrian decir, no me maravillo que tu que eres de grande corazon, y toda la nacion de portugueses, que han seido siempre hombres generosos en todas grandes empresas, te vea con el corazon encendido y gran deseo de poner en obra el dicho viaje.	speech and dealing with the learned men and of genius from here, as well in religion as in all the other sciences, because of the great reputation of the empires and administrations of these our parts; for all which things and many others which might be mentioned, I do not wonder that thou who art of great spirit, and the whole nation of the Portuguese, who have always been men noble in all great undertakings, shouldst be seen with heart inflamed and full of desire to put into execution the said journey.

ITALIAN VERSION OF THE *HISTORIE.*

(With English Translation.)

ITALIAN.	ENGLISH.
A Christoforo Colombo, Paolo, fisico, salute.	To Christopher Columbus, Paul, the physician, health.
Io ho ricevuto le tue lettere con le cose, che mi mandasti, le quali io hebbi per gran favore: e estimai il tuo desiderio nobile, e grande, bramando tu di navigar dal Levante al Ponente, come per la carta, ch'io ti mandai, si dimostra: la quale si dimostrera meglio in forma di sfera rotonda. Mi piace molto,	I have received thy letters with the things, which thou didst send me, which I hold as a great favour; and I considered thy desire noble and great, thou wishing to sail from the east to the west, as is shown by the chart, which I sent thee: which would be better shown in the form of a round sphere.

ITALIAN.

che ella sia bene intesa, e che detto viaggio non sol sia possibile, ma vero, e certo, e di honore, e guadagno inestimabile, e di grandissima fama appresso tutti i christiani.

Voi non lo potete conoscere perfettamente, se non con la esperientia, ò con la prattica, come io l'ho havuta copiosissimamente, e con buona, e vera informatione di huomini illustri, e di gran sapere, che son venuti di detti luoghi in questa corte di Roma ; e di altri mercatanti, che hanno traficato lungo tempo in quelle parti, persone di grande autorità.

Di modo che, quando si fara detto viaggio, sara in Regni potenti, e in città, e provincie nobilissime, ricchissime, e di ogni sorte di cose, a noi molto necessarie, abondanti ; cioè di ogni qualità di specierie in gran somma, e di gioie in gran copia.

Ciò sara caro etiandio a quei Rè, e principi, che sono desiderosissimi di pratticare e contrattar con christiani di questi nostri paesi, si per esser parte

ENGLISH.

It greatly pleases me that it has been well understood, and that the said journey not only may be possible, but true and certain, and of honour, and inestimable profit, and of the very highest fame among all Christians.

You cannot understand it perfectly, unless by experience and by practice, as I have had most fully, and with good and true information from illustrious men and of great knowledge, who came from the said regions to this Court of Rome ; and from other merchants, who have long traded in those parts, persons of great authority.

In such manner that, when the said journey is made, it will be in powerful kingdoms, and in most noble cities and provinces, most wealthy, and abounding in all sorts of things, to us most necessary ; that is in every kind of spices in vast quantity, and in jewels in great abundance.

That will also be agreeable to those kings and princes, who are most anxious to communicate and treat with the Christians of these our countries,

ITALIAN.

di lor christiani, e si ancora per haver lingua, e prattica con gli huomini savij e d'ingegno di questi luoghi, cosi nella religione, come in tutte le altre scientie, per la gran fama degl' imperij, e reggimenti, che hanno di queste parti. Per le quali cose, e per molte altre, che si potrebbono dire, non mi maraviglio, che tu, che sei di gran cuore, e tutta la natione Portoghese, la quale ha havuto sempre huomini segnalati in tutte le imprese, sij col cuore acceso, e in gran desiderio di eseguir detto viaggio.

ENGLISH.

because some of them are Christians, and also in order to have speech and intercourse with the men learned and of genius of these parts as well in religion as in all the other sciences, through the great renown they have of the empires and governments of these regions. For which things, and for many others, which could be mentioned, I do not wonder that thou, who art of great intrepidity, and all the Portuguese nation, which has always possessed men renowned in all enterprises, shouldst be burning and in great desire to prosecute the said voyage.

APPENDIX F

SOME PRIMARY CONSIDERATIONS ON THE NATURE, ORIGIN, AND MEANING OF THE SO-CALLED SECOND LETTER OF TOSCANELLI.

LETTER FROM MR JOHN B. SHIPLEY.

FOLLOWING the letter of which the text and translation have just been given, I had observed in my French edition that this letter struck me as strange for various reasons, and I put forward the opinion that it might be the rough draft or first outline of the principal letter.

Mr Shipley, who was struck by this remark, sends me a letter of great interest on the subject. With me, he thinks this supposed second letter served as the text for drafting the first; but he suggests it may well have been an authentic document written by an Italian in Rome to some unknown Portuguese, at the period when King Joao II was taking up again the schemes of Prince Henry the Navigator. This letter may have fallen into the hands of Columbus or a member of his family, and it was used for the concoction of the letter attributed to Toscanelli. Mr Shipley defends this theory by very ingenious and powerful arguments. I give

here his letter in full, inasmuch as it raises a new question which deserves to attract the attention of the critics :—

HENRY VIGNAUD, Esq.,
Paris.

Author of "*La Lettre et la Carte de Toscanelli*," etc., etc.

DEAR SIR,

As you call the attention of criticism to the so-called "Second Letter of Toscanelli," said to have been addressed by him to Columbus, pointing out that it appears to be merely an abridgment or rather a draft of the First Letter, I may perhaps be permitted to suggest a few considerations regarding it, as a basis for further criticism.

Taking it, in the first place, as the same letter in another form on account of the evident parallelism of subject running through the two letters and characterizing their general contents, we have to decide whether it is to be regarded as (*a*) an abridgment of the First Letter, whether by the author or by another person, that is, as having been made from the First Letter itself after it was written ; (*b*) as a draft by the writer of the First Letter, and used by him in the elaboration of the longer document, with amplifications and modifications, but without essential change of plan ; (*c*) as a draft of a differently conceived letter having the same general purport as the final document, but essentially changed in form and conception during the process of elaboration by the author.

This latter supposition appears to be the one put forward in your book, page 271 ; it is evidently more correct than either (*a*) or (*b*), inasmuch as this letter contains, along with passages which are obviously greatly expanded in the full copy, others which are not to be found in the longer document, and therefore are not abridged from it. There is, besides, a complete dissimilarity in the form of the two letters, and in the arrangement of the material common to both, so that they produce different impressions on the mind of the reader, and in fact tell quite different stories.

But there is another point of great importance to be considered, namely, whether this Second Letter is really the work of the author of the First Letter, whom we assume to be demonstrably not Toscanelli, or whether it is possible to regard it as an original letter by another hand, which has been made use of in the elaboration of the First Letter.

Of course the possibility that it is a genuine letter by Toscanelli, referring to the projected Atlantic voyage of Columbus, may be set aside for the same critical reasons which militate against the genuineness of the First Letter as coming from his hand; and especially the arguments that there is nothing to show that Toscanelli ever concerned himself with the possibility of a western route to India or China, or that he was regarded in Portugal as an authority on the subject, or that he corresponded with any one on these matters. Nor is it likely that Columbus would have been in a position to send Toscanelli letters and other things which the latter acknowledges as a great favour. But these are not the points I propose to discuss.

Let us now examine the Second Letter as it stands, and consider the internal evidence presented by it.

(1) It contains in one document the covering letter and the substance of the First Letter. That is to say, it is addressed directly to Columbus, and contains no mention of Fernam Martins. The superscription is word for word that of the covering letter.

(2) It is not a mere abridgment of the longer letter, for out of 65 lines occupied by the Spanish text, on pages 322-324 of your book, only 30 lines appear to correspond fairly well with the substance of the longer text, while 10 lines correspond only in general sense, and the remaining 21 lines, or a full third of the letter, are not represented by any portion of the longer letter, and therefore are extraneous to it.

(3) This letter would appear to have been written from Rome—(aqui en corte de Roma).

(4) It is apparently addressed to a Portuguese, for it

compliments the Portuguese nation in terms which suggest that the writer believed he was addressing one of that nation. Of course there is the possibility that the writer was under a misconception if the letter was really addressed by some one in Italy to Columbus in Portugal, but the phrase is scarcely one that would be likely to occur in a letter to Columbus, either real or fictitious, composed by one who knew that Columbus was a Genoese. Nor would there be any object in making a forged letter, at or after the period of the Columbian voyages, pay such compliments to the Portuguese, and to Columbus as one of the learned men that that nation had produced. There is therefore a possibility that the letter may have been really sent from Italy to Portugal, quite independently of the question who were the real author and recipient.

(5) The general sense of the Second Letter, where it differs from the First, represents Columbus (or rather the recipient of the letter) as having sent to the writer valuable matters, presumably with reference to his own projects, in return for and in reply to which the writer sends (yo te invio) or has sent (io ti mandai) a map which he has pleasure in thinking will be (has been) understood, and expresses confidence that the voyage is not only possible but feasible, profitable, and honourable. He alludes to his own great experience, and says that he has spoken, "here at the Court of Rome," not only with an ambassador, as in the longer letter, but with merchants also who have lived in those countries, men of great authority. Another difference is that these countries are given as the definite end and aim of the voyage, not merely as likely to be reached in case of adverse winds, etc. He also states that a great part of the people are Christians. He alludes to the noble mind of his correspondent, as a distinguished example of the sagacious and enterprising Portuguese, and speaks of his heart being inflamed with desire to carry out his projected undertaking. I have here summed up those passages which are not to be found in the First Letter, making up, as I have stated, about a third of the bulk of the Second Letter.

(6) There is a curious passage which, though I have counted it among the passages (30 lines) which correspond fairly in the two letters, yet appears in the longer letter with the sense exactly reversed. In the Second Letter it is the people of those parts who desire to have intercourse with Europe in order to come into touch with the learned men of genius in religion and sciences, also on account of the fame of the European empires and governments (regimientos). In the First Letter it is the Orient that is worth exploring by Europeans, not only for the gold and gems, but, by a sudden turn of the sense, because it is true that those parts possess learned men of art and genius who govern those distant countries and direct the battles, or say the *regimientos* in a military sense. This change of the seat of good government from Europe to the Far East is rather remarkable!

(7) In working the substance of the Second Letter into the First, the phrases have not been copied literally, but rather taken as the themes on which new sentences have been constructed. Of course allowance has to be made for changes incidental to translation, but this appears to have been the general rule. The longest verbatim phrase common to the Spanish versions of the two letters—that is, recognised by the Spanish translator as identical—is "de todas maneras de specieria en gran suma" (pp. 308, 323), which again occurs almost verbatim in a previous paragraph describing the sending of the map in the First Letter. The only other long phrase I notice is, "Muchas otras cosas se podrian decir" (pp. 310, 324), the ending of which has suffered a total change, and still another in the translations of the First Letter. The longest clause giving the same connected sense appears to be that previously alluded to, "hombres sabios . . . batallas" (pp. 309, 324), with its inverted meaning. This phrase follows on the one just quoted (specieria) in Letter I, whereas it is more fittingly and logically introduced in Letter II, which is in its arrangement far less discursive and inconsequent than Letter I, and unlike that, seems to have been written by a

man with a well-ordered mind; it appears to have been referred to at intervals by the author of Letter I, when he was at a loss how to continue. In this way we may say that small fragments of Letter II are found scattered through Letter I, but for the most part changed in form and context to suit the purpose of the writer.

(8) I may here remark briefly that I regard the Italian texts of both letters as the better translations of the respective originals, the Spanish being at times faulty, and obscuring points which are brought out by a reference to the Italian. I will give the main instance of this that occurs in the Second Letter as illustrating my theory of the use made of the latter. The Latin phrase in the First Letter, *quod debebit esse jucundum satis,* which has puzzled M. Sumien (note 20, Appendix A), is a reproduction of the phrase in the Second Letter, "Ciò sarà caro etiandio a quei Rè," and this phrase has been differently taken by every successive translator. Thus:—

Letter II, Italian: Ciò sarà caro etiandio a quei Rè.

Letter II, Spanish: Tambien se irà a los dichos Reyes.

Letter I, Columbine: Quod debebit esse jucundum satis.

Letter I, Spanish: De que debeis holgar mucho.

Letter I, Italian: I quali desiderate molto conoscere.

The last two have understood the word *tibi* in the text from which they worked, and the Italian has probably paraphrased the sense, a liberty rarely taken by this translator. No passage has undergone more change than this, while remaining recognisable, and it well illustrates the connection between the Italian of Letter II and the Columbine version. It also shows that the Italian cannot be a translation from the Spanish of Letter II, as it reproduces a phrase that was made use of by the compiler of Letter I, and to which the Spanish gives no clue. The Spanish translator has in fact treated this paragraph, introduced by these words, as a continuation of the sense of the preceding one, meaning that the voyage will bring you to those countries . . . and to those kings; in the Italian a fresh thought is commenced.

(9) To come now to the pith of the letter. The reference to the route in the first paragraph is curious; it speaks of reaching the countries of the East by way of those of the West, and although this has usually been read as synonymous with a Western voyage, starting from Europe or the Canaries, yet this is not what it says. In fact it would apply more nearly to explorations along the African coast than to a voyage due West, which can hardly be described as by way of the parts (in the sense of countries) of the West. Paragraph I of the Second Letter makes complete sense, even better than at present, if we leave out all the words from "come per la carta" to "bene intesa"; this sentence then reads in English:— "I consider your project a noble and grand one, for going by sea to the Eastern countries by way of the Western ones, and that the said voyage is not only possible, but veritable and certain, and (productive) of great honour and profit as well as of the greatest fame among all Christians."

It may therefore be useful for the time being to bear in mind that the sense of the letter is complete without the phrases referring to the sending of the map, and to the latter being understood. We shall examine it without these words, and then consider the question of the map separately.

(10) The Second Letter, divested of the reference to the map, is then written by some one in Italy, apparently in Rome, to some one in Portugal, presumably a Portuguese, approving a project of exploration of countries whose inhabitants were largely Christians, and where spices and gems (it is the First Letter that adds gold, silver, and pearls) were expected to be obtained. The route indicated is by way of Western Africa.

This project appears to be absolutely the same as that entertained at various times by the Portuguese, with reference to the country of Prester John, which, as noted in your book, page 56, note 56, was generally classed along with the spice country under the general name of the Indies. It refers to the Portuguese search for Ethiopia along the West coast of Africa, and not to any transatlantic voyage at all! In other

words, it brings us back to the projects referred to in the Bull of 1454 and the Treaty of 1479 (your book, pp. 58, 61, 67, etc.), and which Joao II again took up in 1481 (page 64). As you say on page 59, "It was not to what we now call India that the Portuguese desired to go, it was to the African India, Prester John's India, inhabited by Christian people"—described in the Bull of 1454 as "qui Christi nomen colere dicuntur," and of whom the Second Letter says, "per esser grande parte di lor Christiani."

(11) The difficulty of admitting the date 1474 with regard to the commerce of spices disappears when dealing with the project of Joao II, seeing that you say (page 66) that in 1481, which was the year before Toscanelli's death, this King projected new expeditions of which spices formed one of the objects. There is no doubt that in this letter there exists a confusion between the India of Prester John, the India of the spices and jewels, and the countries described by Marco Polo and other travellers, such as Bartolomeo Fiorentino and Nicolò di Conti (page 68).

The original of this letter might therefore be referred to the period 1481-1482, when the voyages under Joao II were in contemplation. Whether this train of reasoning affords any clue to the real author or recipient of the supposed original letter, I leave to be decided by those who have special knowledge of Portuguese relations with Rome at this period.

(12) In the preceding remarks we have left out of count the four lines on page 324 referring to the map, the advantages of a globe, and the question of its being understood. But since our conceptions of the direction of the journey to be undertaken have changed, we can look at the question of the map from a new standpoint. In the first place, the sense is complete without the four lines referred to; in the second, the map, if it existed, must have been one showing the latest geographical notions respecting the Indies, whether Asiatic or African, and the way thither, by the "parts of the West," which would mean by Western Africa, and curiously enough the phrase is a translation of the Carthaginian and Arabic

terms for North-West Africa, from which we derive Mauritania and Morocco. (See Vivien de Saint-Martin, *Histoire de la Géographie*, p. 34). The main difficulty is that a sphere does not seem so essential to the correct understanding of this map as of one based on the spherical shape of the earth, *i.e.*, of the so-called "Toscanelli map" described in the First Letter; the map of the Second Letter, admitting its existence, is a different map altogether.

Taking the phrase as it stands, it is not sense to write "I note your project, as shown in the map I now send you." The sense requires "the map which you send me," or else "the map I sent you before." This latter is the sense of the Italian, and has always encouraged the supposition that this document was a Second Letter referring to the First Letter with its map of the Atlantic Ocean. Then, too, the letter does not say, "I hope that the map I now send, or have sent, will be understood." It expressed pleasure that the map already sent is, that means has been, understood, despite the difficulty of making the matter plain without a globe. Taking this view, it is not necessary to reject any portion of the actual text of the Second Letter, and the only words we take exception to, or challenge, are those forming the superscription, stating that the letter was sent by Toscanelli to Columbus.

(13) What then do we gather from the first paragraph, as to the correspondence referred to? Some one in Portugal, largely concerned in promoting the enterprise under Joao II (1481-1482) had written to a person at the Pontifical Court, of wide information, and interested in geographical discoveries, such a man as, for instance, Cardinal d'Ailly had been, to know what was the latest intelligence brought back by travellers like Nicolò di Conti, and any other geographical information obtainable on this subject at Rome, which, as is well known, was the centre to which all information of importance was sent. This great authority had already sent a map, and has received (probably) further details as to the proposed enter-

prise, which he esteems a great favour. He is thus able to judge of the whole project, from the nature of which it is evident that his map, although only a projection on a plane surface, has been understood, and he sees also that the enterprise is genuine and certainly feasible, as well as likely to be productive of great profit and renown. He then proceeds in the remainder of the letter to emphasize certain points of special interest to the Roman Court, and ends with a graceful compliment at once to his correspondent and to the nation he represents.

To obtain a correct idea of the purport of the Second Letter we must therefore read it without any reference to the First Letter, but rather having in mind the plan of Joao II. It would thus appear that Columbus, however he may have become possessed of this letter, must have been aware of those plans, and if the letter was addressed to him he must have been largely concerned in elaborating them. I do not suggest this, leaving the subject to those who have special means of testing it, but I do suggest that having obtained this letter, by whatever means, he derived the idea of using it (by concocting a false letter to represent the previous one) as an explanation of the sources of his alleged plans and of his actual map, for the origin of which he found it difficult to account. He also invokes the authority of Toscanelli as an endorsement of his alleged or ostensible views on the possibility of reaching India by the west. An interesting question here arises, viz.: what brings Toscanelli into the question at all, or what put it into any one's mind to father on him the whole correspondence, the cosmographic views, and the map alleged to illustrate them?

I beg to remain, dear Sir,

Yours most respectfully,

(Signed) JOHN B. SHIPLEY.

GENEVA, *Dec.* 21, 1901.

& quibus ingeniis & artibus ita potens hec p
ad tuam peticionem quantum breuitas t
satisfacere . data florentie .25. iunii .14
A ciuitate vlixipponis per occidentem ind miliaria
& maximam ciuitatem quinsay circuit
celi & multa miranda de ea narrantur
tocius spere . que ciuitas est in prouinc
insula antilia vobis nota ad insulam
margaritis & gemmis & auro solido co
maris spacia transeundum . multa fort
ex se ipso reliqua prospicere . vale dile

Transcription of the Letter

lombiana,

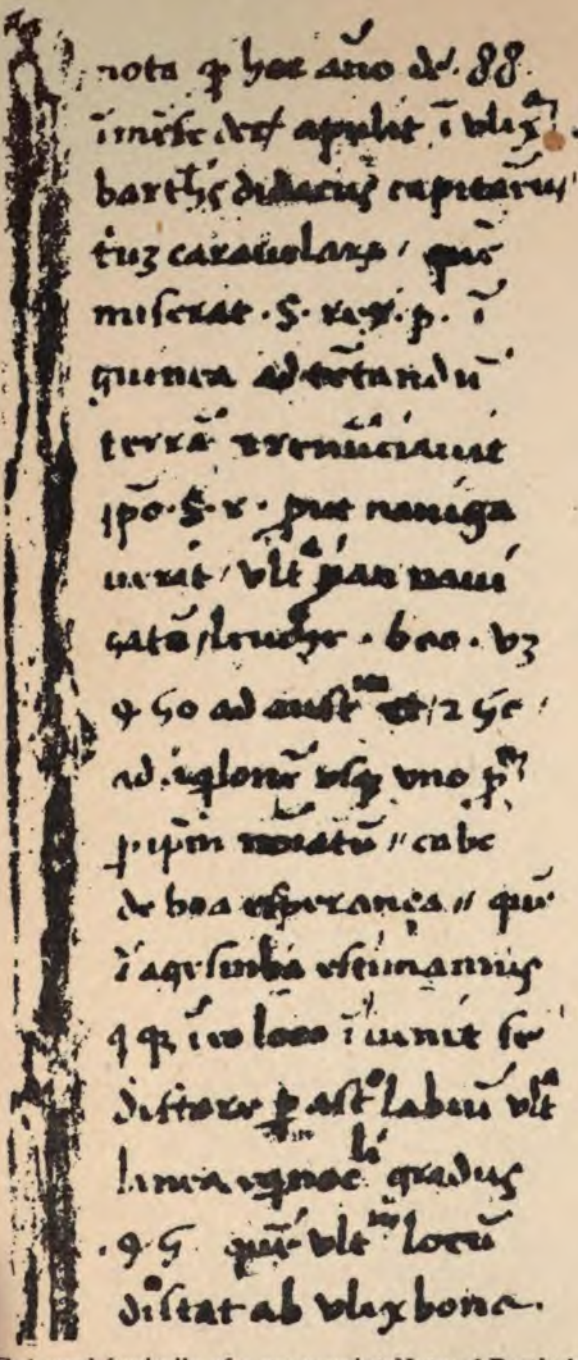
APPENDIX G

ENLARGED (DOUBLE-SIZE) FACSIMILE OF THE TEXT OF THE LETTER TO MARTINS, ACCOMPANIED BY A FIGURED TRANSCRIPTION.

This facsimile is taken from the photographic reproductions of the Letter made by Mr Harrisse and the Editors of the *Raccolta Colombiana.*

The transcription of the document is taken from M. de Lollis' clever restoration made for the *Raccolta.* The faded or illegible portions of the text, restored by M. de Lollis, are printed in italics.

APPENDIX H.



Enlarged facsimile of a manuscript Note of Bartholomew Columbus (*Imago Mundi* of the Colombina).

APPENDIX H

ENLARGED FACSIMILE OF SPECIMENS OF THE HANDWRITING OF CHRISTOPHER COLUMBUS AND HIS BROTHER BARTHOLOMEW, ACCOMPANIED BY A FRAGMENT OF THE LETTER.

THESE three facsimiles are printed in parallel columns, in order to facilitate comparison.

The first is a note from the *Imago Mundi* on the expedition of Bartholomew Diaz to the Cape of Good Hope, and is accepted by all critics as being in the handwriting of Bartholomew Columbus.

The second, placed in the centre column, reproduces a portion of the Letter.

The third is taken from a note on the Pliny in the Columbina, and is undoubtedly in the handwriting of Christopher Columbus.

TABLE FOR UNDERSTANDING THE H[illegible]LLI.

	Spaces of 5 Degrees.	Number of Mi[illegible] to the Degre[illegible] at Equator.	[illegible] Earth [illegible]cle.
Uzielli . . .	72	$67\frac{2}{3}$ (50 at 42°)	[illegible]tres
D'Avezac . .	72	$62\frac{1}{2}$ (50 at 37°)	[illegible]tres
H. Wagner . .	72	$66\frac{2}{3}$ (50 at 41°)	[illegible]tres
Another Calculation	72	$67\frac{2}{3}$	[illegible]tres
Letter to Martins and Columbus	72	60 (50 at $33\frac{1}{2}$°)	[illegible]tres
		$56\frac{2}{3}$ (50 at 28°)	[illegible]tres
Posidonius .			
Marinus of Tyre		$62\frac{1}{2}$ equal to 500 stadia	[illegible]lia of [illegible], or [illegible], or [illegible]etres
Ptolemy . .			
Alfragan, adopted by Columbus . .		$56\frac{2}{3}$	[illegible] or [illegible]tres
Bessel, 1836 . .			[illegible]tres
F[illegible] . .			[illegible]tres

APPENDIX I

TABLE FOR UNDERSTANDING THE HYPOTHESES ON THE MEASUREMENT OF THE EARTH ATTRIBUTED TO TOSCANELLI.

In the discussion on the different standards of measurement applicable to the so-called Toscanelli Map no notice was taken of the mathematical relation existing between the length of the degree at the Equator and on the parallel of Lisbon which at that time was placed on the 41° north latitude. If on this parallel the degree measures 50 miles, as the letter would appear to indicate, it follows as a matter of course that on the Equator it cannot be reckoned either at $67\frac{2}{3}$ miles, or at $62\frac{1}{2}$ miles, or at $56\frac{2}{3}$ miles, but simply and solely at $66\frac{2}{3}$ miles, as Herr Wagner has shown.

In the text we have admitted that the author of the Letter and Map, who, in our opinion, was not a man of learning, may have been ignorant of the exact proportion between the length of the degree at the Equator and at the different parallels; but this is merely an hypothesis justified, we think, by the trifling value of these documents.

If the exact mathematical relation between the standard adopted for the measurement of the degree along the Great Circle and of the degree along the parallel where, according to the Letter, it only measures 50 miles, is to be maintained, this parallel must be shifted each time the standard is changed, and this is just what D'Avezac and Uzielli have done. M.

D'Avezac, who adopted Ptolemy's standard of 62½ miles, is compelled to lower the parallel having 26 spaces each of 250 miles, mentioned in the Letter, to the 37th degree (Lagos or Cape St. Vincent), because that is the only north latitude where the degree measures 50 miles if at the Equator it is reckoned at 62½ miles. For the same reason Signor Uzielli raises the parallel in question to latitude 42°, because it is only there that the degree measures 50 miles if it is reckoned at 67⅔ miles on the Equator.

But these changes are arbitrary. Those who make them suppose that the author of the Letter wished to refer to the parallel that must be followed in order to reach Quinsay when he says that from Lisbon to that town there are 26 spaces of 250 miles each, and accordingly they fix the point of departure at either Lagos or Cape St. Vincent with M D'Avezac, or at Cape Finisterre with Signor Uzielli. The text of the Letter authorizes neither of these views, for all that one finds therein bearing on the matter is the mention, in one passage, of the isles whence one should set forth, and, in another, of the 26 spaces there are between Lisbon and Quinsay. If therefore strict regard is paid to the text, it is from the Canary Isles (no others answer to the description) or from Lisbon one must start to reach the Indies, and not either from Lagos or Cape St. Vincent, and still less from Cape Finisterre.

We may add that several reasons exist for thinking the author of the Letter did not place Quinsay on the same parallel as Lisbon. One is that this city actually lies nearly 10 degrees further south; another, and a very marked one, is that the Letter itself states that Quinsay is in the province of Mangi, near to Cathay, *i.e.*, in Southern China, whereas were it placed on the parallel of Lisbon it would be in Cathay *i.e.*, Northern China. Finally, when in his search for Cipangu Columbus found himself in front of Cuba, he wrote in his Journal (1st November 1492): "I have before me Zaiton and Quinsay," which suffices to prove he did not think that city

lay on the same parallel as Lisbon. Therefore the mention made in the Letter of the 26 spaces which divide Lisbon from Quinsay in a straight line does not necessarily imply that reference is made to the same parallel.

To sum up; only two hypotheses are admissible for the reconstruction of the Map: either the author of the Letter wished to point out that the course he recommended was the parallel of Lisbon, viz., the 41st, which was the one on which Lisbon was then placed, and in this case the Equatorial degree measured $66\frac{2}{3}$ miles, as Hermann Wagner has demonstrated; or the parallel of Gomera—the 28th—and then the Equatorial degree measured $56\frac{2}{3}$ miles. We think it is in the latter sense that the Map must be understood, for the Letter states that it is from the Isles, *i.e.*, the Canaries, the expedition must set out; furthermore Columbus, who did in fact lay a course from these isles, over and over again affirms that the Equatorial degree consists of $56\frac{2}{3}$ miles, while the parallel which he selected and followed—the 28th—is precisely the one on which the degree measures 50 miles if it is reckoned at $56\frac{2}{3}$ miles on the Equator.

The Table shows at a glance the results obtained from the various methods of understanding the measures mentioned in the Letter to Martins.

APPENDIX J

ATTEMPT TO EXPLAIN, AFTER THE LETTER TO MARTINS AND THE NOTIONS OF COLUMBUS, THE MAP ATTRIBUTED TO TOSCANELLI.

THE PROJECTION OF THE MAP. — The projection on which the so-called Toscanelli Map was made has attracted the attention of many geographers. Great scientific interest existed on deciding this point so long as it was believed that this famous Map was the work of a learned astronomer, and that it dated from 1474. It is clear that if, at that early date, some one had constructed a Map answering to the description given of it in the Letter to Martins, *i.e.*, a graduated marine chart, its author was justly entitled to be considered one of the founders of modern cartography. But if, as we think we have shown, the Letter and the Map which is its complement are later by a quarter of a century than the date attributed to them ; if the Map, instead of being the expression of a new scientific conception of the world illustrated by a freshly devised graphic process, is simply an ordinary one containing absolutely nothing unusual either in principle or in form ; if, in a word, it merely represents the geographical ideas of Columbus, ideas formed after his discovery, and picked up by chance reading without any scientific cohesion, then the question of its projection loses all importance, and we have only to search for what information it may contain relative to distances and to the points of departure and arrival.

Herein lie the only facts which can interest us to-day, and in order to make them clear a modern map is preferable to a map compiled after a purely hypothetical projection. Probabilities point to this projection having been Ptolemy's, modified by Donis, for it is on this projection that the 1478 and 1490 editions of the Alexandrine geographer were drawn, a copy of the former edition, bearing the mystic signature of Columbus, forming part of the Columbina collection. But from our standpoint this is a matter of indifference. It is not therefore, strictly speaking, a restoration of the lost Map we propose giving, but a map which shows the idea its author had formed of the Atlantic, and by what route he thought the Indies could be reached.

Boundaries of the Map.—The Latin text says simply that "your shores are shown and the islands from which you may begin to make a voyage." The Spanish and Italian versions say: "all the extremity of the West, starting from Ireland southwards to the end of Guinea." Guinea, at that period, embraced all the western coast of Africa. The Map is therefore limited to the north by the southern coast of Ireland, to the south by the Equator, to the east by the meridian of Lisbon, and to the west by the meridian of Quinsay.

The Fundamental Meridian.—The first meridian of the Map is placed at Lisbon, because all the information respecting distances given in the Letter has reference to that city. Were another to be chosen it would have to be the isle of Ferro, since Columbus, whose cosmographical notions we have shown to be identical with those expressed in the Letter, reckoned all his distances from this island, which is the most westerly of the Canaries.

The Fundamental Parallels.—These two parallels are those of Lisbon, the 41st, and of the Canaries, the 28th, both of which are mentioned in the Letter. They are drawn with an indication of their measurement relative to that of the Equator.

Scales.—The Map is divided into 26 spaces of 5 degrees each, shown in the scale at the bottom of the Map. The Equatorial degree is theoretically reckoned at 56⅔ miles, and practically

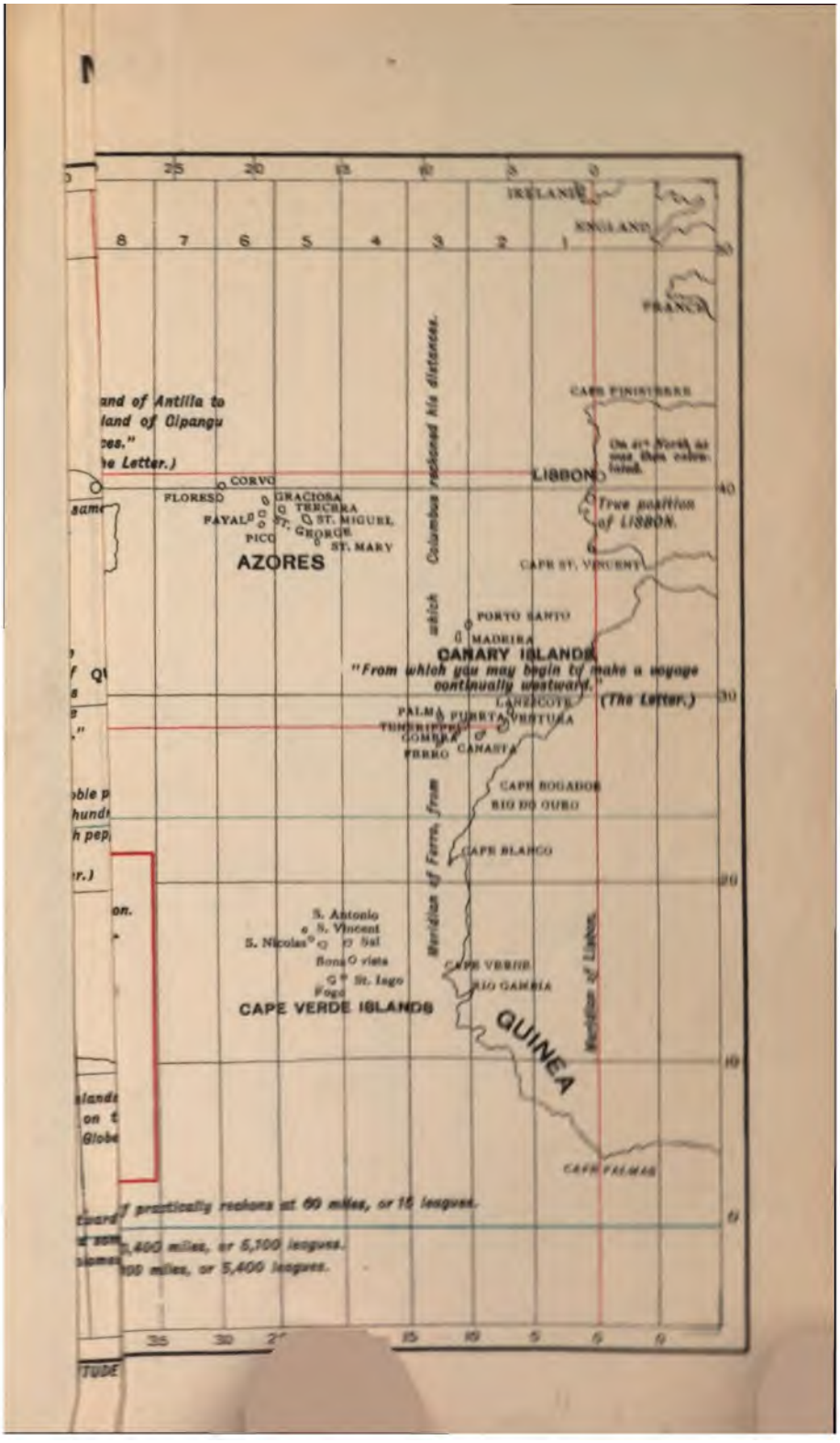
at 60 miles, or 15 leagues. That is Columbus' measurement. In the scale shown at the top of the Map the degree is reckoned, as in ordinary maps, at the rate of 20 leagues.

The object being to show the distances covered, according to the different methods of reading the Letter attributed to Toscanelli and the measurements of Columbus, it was impossible to give a uniform scale to the Map. Distances vary with the length of the degree on the various parallels, and this length is in proportion to that attributed to the degree at the Equator. If, for example, we find that it is on the 41st parallel that the 26 spaces of 5 degrees separating Lisbon from Quinsay each measured 250 miles, or 50 miles to the degree, then we must give $66\frac{2}{3}$ miles to the Equatorial degree.

But if we bring the same parallel to the 28° north latitude, then the Equatorial degree will only measure $56\frac{2}{3}$ miles.

THE ISLES.—The Latin text speaks incidentally of the isles, and seems to mean thereby those lands so fertile in spices and precious stones which are the object of the journey. The Spanish and Italian versions give this sense to the phrase. The Map therefore shows, at haphazard, islands in the neighbourhood of Zaiton. Marco Polo places there a very great number.

The islands placed near to Cipangu are not mentioned in the Letter ; but Las Casas says that the Map he attributes to Toscanelli indicates a great number at that spot (*História*, vol. I., p. 316).


IRELAND
ENGLAND
FRANCE
CAPE FINISTERRE
LISBON
True position of LISBON.
CAPE ST. VINCENT
CORVO
FLORES
GRACIOSA
TERCEIRA
ST. MIGUEL
PAYAL
ST. GEORGE
PICO
ST. MARY
AZORES
Columbus reckoned his distances.
which
PORTO SANTO
MADEIRA
CANARY ISLANDS
"From which you may begin to make a voyage continually westward." (The Letter.)
LANZEGOTE
PALMA
PUERTA VENTURA
TENERIFFE
GOMERA
FERRO
CANARIA
CAPE BOJADOR
RIO DO OURO
CAPE BLANCO
Meridian of Ferro, from
S. Antonio
S. Vincent
S. Nicolas
Sal
Bona Vista
St. Iago
Fogo
CAPE VERDE ISLANDS
CAPE VERDE
RIO GAMBIA
QUINEA
Meridian of Lisbon.
CAPE PALMAS
f practically reckons at 60 miles, or 15 leagues.
,400 miles, or 5,100 leagues.
00 miles, or 5,400 leagues.

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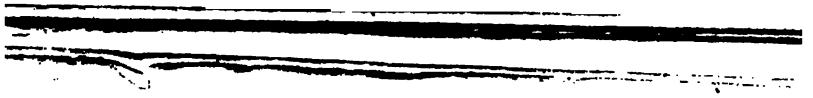

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